Module 6: Measure It

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Mathematic

Mathematics

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Grade Two Mathematics: Module 6

Measure It!

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Grade Two Mathematics
Module 6: Measure It
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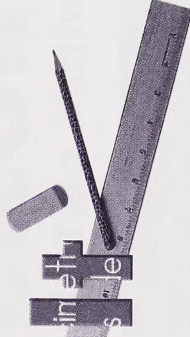
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- Learning Resources Centre, **http://www.lrc.learning.gov.ab.ca**

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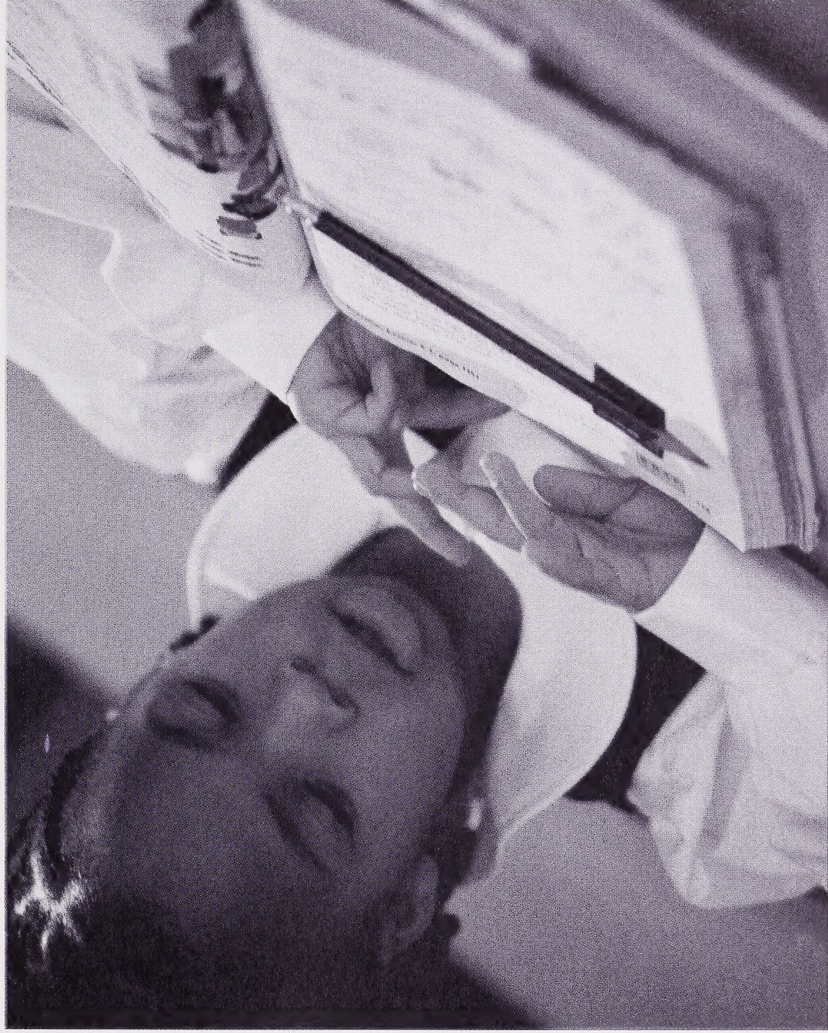
Welcome

to Grade Two Mathematics

Have you ever shared a cookie with a friend? Did you try to break it evenly so that you each got the same amount of cookie? Have you tried to figure out how tall you are? Can you tell how much time you have to do something? How much does something weigh? In Grade Two Mathematics, you will learn how to do these activities.

Look at the picture on this page. It gives the titles of the Student Module Booklets you will be using. You are now using Module 6: Measure It.

Module 1
Having Fun
with Numbers

Module 2
Working with
Big Numbers

Module 3
Having Fun
Adding and
Subtracting

Module 4
Super Shapes

Module 5
It's About Time
—and Patterns, Too

Module 6
Measure It

Module 7
Numbers
Big and Small

Module 8
What Does the
Data Show?

Module 9
Fun with
Fractions

Contents

Measure it!

Is there a wall in your home that shows how much you've grown since you were very little? Have you ever stood on a bathroom scale to see how much you weigh?

Have you ever lifted something that looked like it was going to be heavy, only to find out it was light?
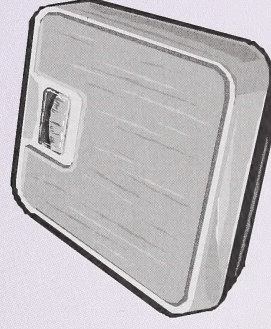
Did you ever notice how much smaller a pencil gets each time you sharpen it?

How many glasses of juice can you drink? Did anyone ever take your temperature when you were sick with a fever? Did you ever have to count money to buy something?

All of these are questions of measurement. They are about things that can be measured. You will be measuring different things in this module: things you use in your everyday life.
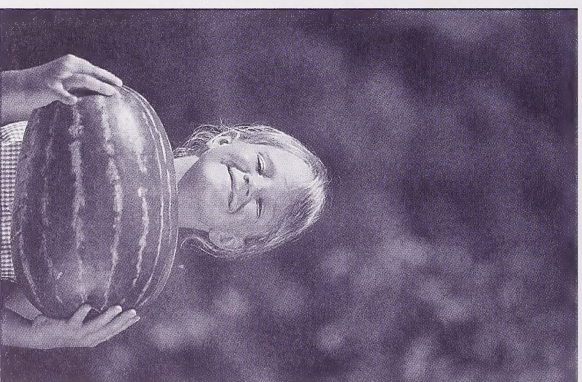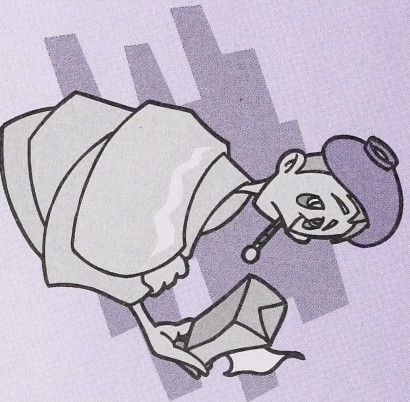
Day 1: Looking Back

In Module 4 you investigated shapes and solids like cones, pyramids, and spheres.

Do you remember how you built skeletal models of these solids? How many sticks and marshmallows did you use for each model?
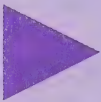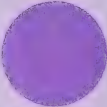
You also counted the number of faces, edges, and vertices each one has. By the way, what are faces, edges, and vertices?

It's time to see how well you remember all of these things.

Looking Back

See how well you remember what you learned in Module 4.

1. Complete this chart.

	Name this shape.	How many sides does it have?	How many corners does it have?
a. ■	_____	____ sides	____ corners
b. ▶	_____	____ sides	____ corners
c. ▮	_____	____ sides	____ corners
d. ●	_____	____ sides	____ corners

2. Put an X on the pictures that are folded into two congruent shapes.

a.

b.

c.

d.

e.

f.

g.

h.
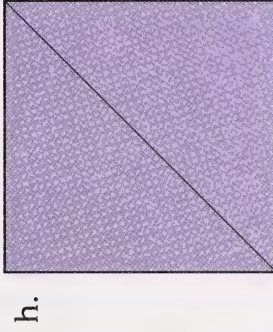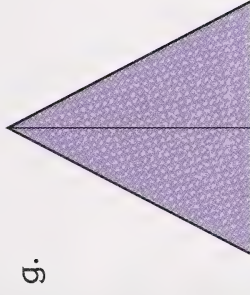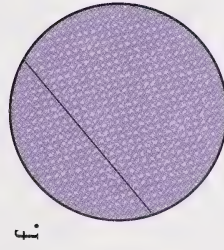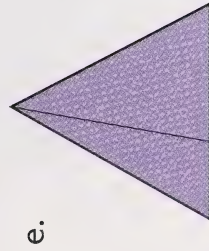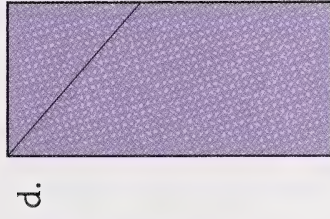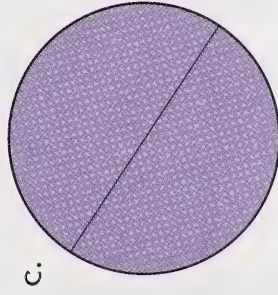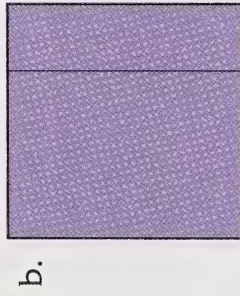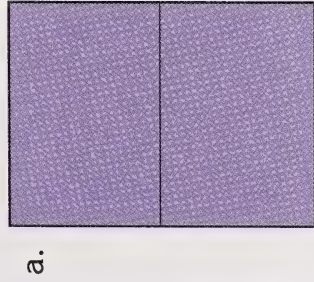
3. Match the solid to its name.

a. cone
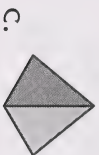
b. pyramid

c. sphere

d. cylinder

e. cube
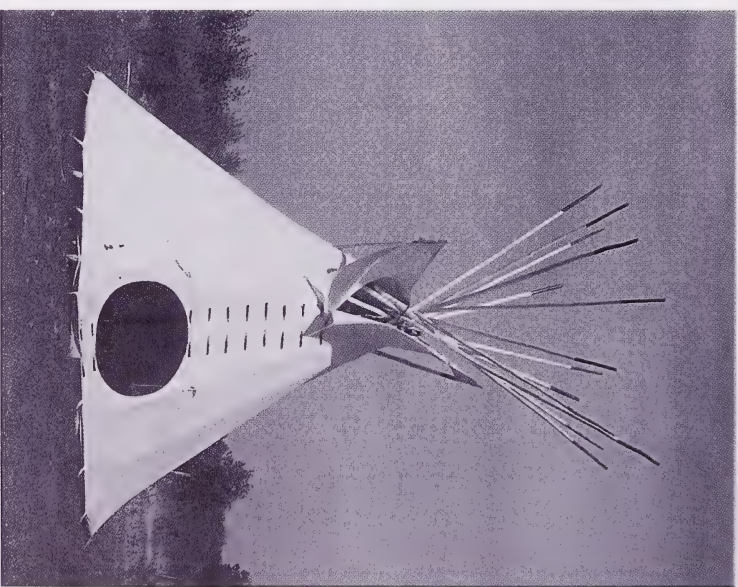
4. Pick the correct 3-D solid from the box to answer the questions.

sphere   pyramid   cube
cylinder   cone

a. What solid has all square faces? _____

b. What solid has no faces? _____

c. What solid is shaped like a pop can? _____

d. What solid has only one face? _____

e. What solid has one square face? _____
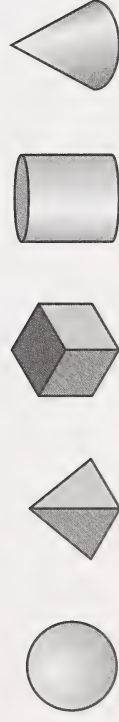
5. Name the shape. Then print the number of faces, edges, and vertices each has.

a. A _____ has ☐ faces, ☐ edges, and ☐ vertices.

b. A _____ has ☐ faces, ☐ edges, and ☐ vertices.

c. A _____ has ☐ faces, ☐ edges, and ☐ vertices.

d. A _____ has ☐ faces, ☐ edges, and ☐ vertices.

e. A _____ has ☐ faces, ☐ edges, and ☐ vertices.

6. How many sticks and marshmallows would you need to make these skeletal models?

a.
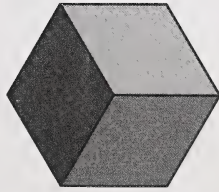
□ sticks

□ marshmallows

b.
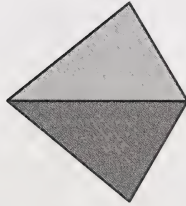
□ sticks

□ marshmallows

7. Why can't you use sticks and marshmallows to make a sphere?

_____

_____

Day 2: Measuring with Centimetres

Every day you use measurement. It is important to know how long, wide, or tall things are.

Sometimes you can estimate the length of an object. For example, to see if a book will fit on a shelf, an estimate will work fine. Other times you need to know the exact size.

When Elena and Jasper each caught a trout on their fishing trip, they wanted to find out which fish was bigger. A ruler could give them that information.

Have you used a ruler to measure things before? Do you know what a centimetre is? Today's activities are all about measuring with centimetres.

Measuring with Centimetres

Lesson 1

Look at these three objects.
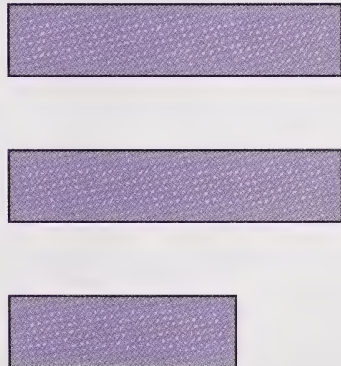
Which one is different? How is it different?

Guide the student to answer shorter, taller, longer.

Now look at these three nails.
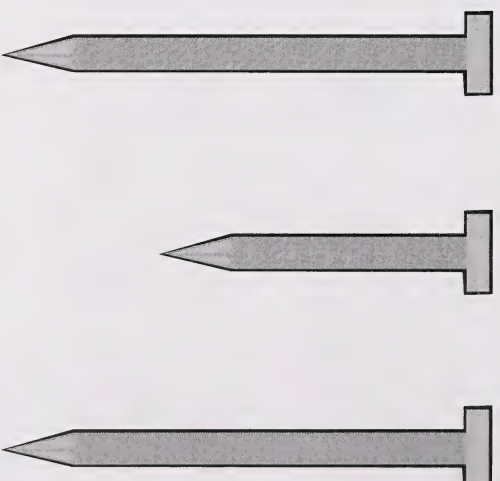
Which one is different? How is it different?
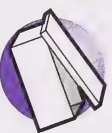
Take a crayon and pencil out of your Math Box.

Look at your pencil and crayon. How are they different?

Make sure the pencil and crayon are of obviously different lengths. If the student does not reply that one is shorter or one is longer, ask which one is longer.

Day 2

Measuring with Centimetres

Your home instructor will give you ten objects. Choose one object as a reference object. Look carefully at all the other objects. Compare each one with your reference object and then place it in one of the boxes below according to whether it is shorter than, the same as, or longer than the reference object.

Reference Object _____

Shorter	Same	Longer

Lesson 2

Sometimes you know just by looking that some objects are longer than other objects. Jasper and Elena were learning about measuring the length of objects. That means they were learning to measure how long something is.

Remember the ice fishing trip Elena and Jasper took to Lake Athabasca? They each caught one large trout. They wanted to know which one was the longer fish. They wondered how to find that out. Do you have any ideas?

Guide the student to answer using a ruler or measuring tape. Discuss how to measure length.

Measuring with Centimetres
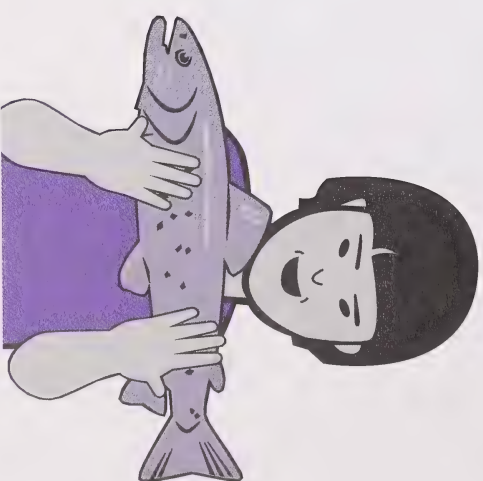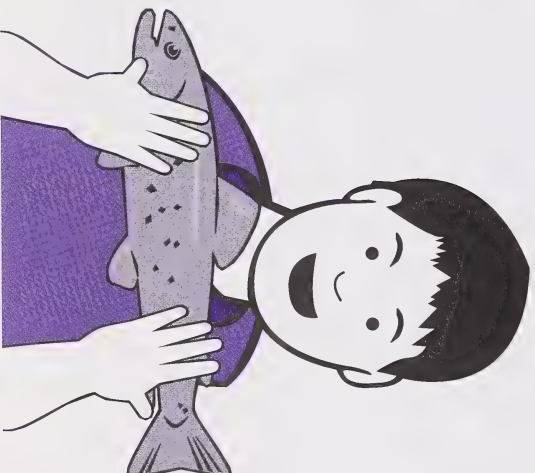
Elena said there was a ruler back at the lodge. Now they could measure their fish!

Here is part of the ruler Jasper and Elena used.

```
| 0   1   2   3   4   5   6   7   8   9   10  11  12  13  14  15
                                                            cm
```
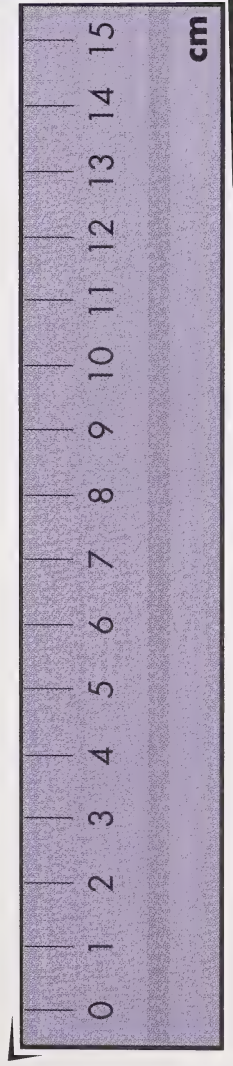
Is this what part of your ruler looks like?

Lesson 3
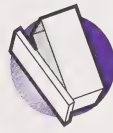
Take your ruler and your interlocking cubes out of your Math Box.

Your home instructor will draw a line between the stars.

★

★

Place the ruler on the page and draw a line exactly one centimetre long between the stars. Show the student how you did it.

Measuring with Centimetres

The line your home instructor drew is one centimetre long. Look at your ruler. Your home instructor will show you the centimetre markings on it.

A centimetre is a **unit** of measurement. That means it is used to measure something. A centimetre is used to measure small objects and distances.

Put one of your interlocking cubes on the line. Is it the same length? Another name for this cube is **centimetre** cube. It is called a centimetre cube because it is exactly one centimetre long.

Look at the line again and remember about how long it is. Now look for objects around your home that are about the same length as that line—one centimetre.

Print the names of three objects you found that are about 1 cm long.

- _____
- _____
- _____

Measuring with Centimetres

Your home instructor will draw another line here between the stars.

★

★

Look at the line your home instructor drew. Place your ruler underneath the line and measure it.

How long is the line? ☐ cm

A shorter way of writing centimetre is **cm**. Whenever you see **cm**, you will know that means centimetre.

Look at the line again and remember about how long it is. Now look for objects around your home that are about the same length as that line—five centimetres.

List three things you found that are about 5 cm long.

- _____
- _____
- _____

Your home instructor will draw more lines on this page.

★
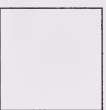
Measure this line. How long is it? ☐ cm

★

Measure this line. How long is it? ☐ cm

Look at your ruler and find the 30 cm mark. Notice how long thirty centimetres is.
Find objects around your home that are about 10 cm, 20 cm, and 30 cm in length.

List three things that are about 10 cm long.

• _____

• _____

• _____

Assist the student to explore for different objects of the various lengths.

List three things that are about 20 cm long.

- _____
- _____
- _____

List three things that are about 30 cm long.

- _____
- _____
- _____

Lesson 4

Before Jasper and Elena measured, they estimated how long their fish were. Jasper estimated his trout was 32 cm long. Elena estimated her trout was 40 cm long. They measured their fish. It turned out that both fish were 35 cm long!

Were their estimates close? Circle **yes** or **no**.

Measuring with Centimetres

What is the difference between Jasper's estimate and the actual measurement of his fish? Show your work here.

What is the difference between Elena's estimate and the actual measurement of her fish? Show your work here.

Yes, both of their estimates were good ones.

Measuring with Centimetres

Look at your pencil. Estimate its length. ☐ cm

Now measure your pencil with your ruler. How long is it? ☐ cm

Was your estimate a good one? Circle 😺**Yes** or 😺**No**.

Look at this page. Estimate its width. ☐ cm

Now measure this page with your ruler. How wide is it? ☐ cm

Was your estimate a good one? Circle 😺**Yes** or 😺**No**.

Look at the legs on your chair. Estimate their height. ☐ cm
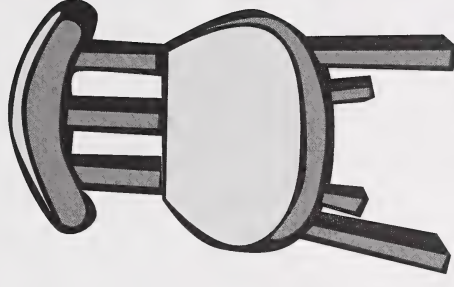
Show the student how to measure if the distance is longer than the ruler length.

Now measure the legs with your ruler. How high are they? ☐ cm

Was your estimate a good one? Circle 🐸yes or 🐸no.

Look at your wrist. Estimate the distance around it. ☐ cm

Now measure your wrist. Can you do it with your ruler? Is it difficult?

Show the student how to measure curved objects using a string and a ruler.

What is the distance around your wrist? ☐ cm

Was your estimate a good one? Circle 🐸yes or 🐸no.

Measuring with Centimetres

Practise measuring with a string around three curved objects such as an orange or your favourite cup. List three and print their measurements.

● _____ [ ] cm

● _____ [ ] cm

● _____ [ ] cm

Measuring with Centimetres

Estimate and then measure the following items using centimetres. Always write **cm** after each one.

Item	Estimate	Measurement
length of this page		
length of your desk		
length of your foot		
length of a finger		
distance around the same finger		
width of a paper clip		
length of a paper clip		
distance around your waist		
width of a window		
your height		
height of a milk carton		
height of your desk		

Measuring with Centimetres

From the list you just measured, order the items from smallest to largest (a. will be the smallest).

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

h. _____

i. _____

j. _____

k. _____

l. _____

Day 3: Centimetre Fun

You did so well with the measurements you made on Day 2 that you get to do more today.

How do you feel about snakes? The snakes you will work with today are quite harmless.

You will also have a sports competition. What sporting events could you do with a cotton ball and a bean?

Are you ready to find out? Have some centimetre fun today!

Centimetre Fun

Lesson 1

Elena and Jasper enjoyed measuring things with their ruler. They came up with some fun activities to practise measuring with centimetres.
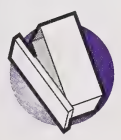
Take your linking cubes out of your Math Box.

Both Elena and Jasper like playing with linking cubes.

Snap together as many cubes as you need to make a train 25 cm long. How many linking cubes do you think you will need to make this train? ▢

One cube is one centimetre long, so 25 cubes are 25 cm long.

Why? _____

Use your ruler to check your train. Is it 25 cm long?

Circle yes or no .

Estimate the number of cubes to make a train 50 cm long.

Make the train and check your train with your ruler. Was your estimate a good one?

Circle **Yes** or **No**.

Estimate the number of cubes to make a train 100 cm long.

Make the train and check your train with your ruler. Was your estimate a good one?

Circle **Yes** or **No**.

Draw a line between the two dots.

•

•

Look back to the measurements you made in Day 2. Check the line you just drew with the objects you measured in Day 2. Which ones were 10 cm? Do they look the same length?

Have the student draw a line without using a ruler.

Do you need a ruler to check the length of your line? Circle **Yes** or **No**.

Can you use the objects you measured to check if the line is about 10 cm long?

Circle **Yes** or **No**.

Do you think you can spot something that measures 10 cm just by looking at it?

Circle **Yes** or **No**.

Draw a line about 25 cm long between the two dots.

What object can you use to check the length of your line? _____

Use a ruler to measure both of the lines you made. Was the first line close to 10 cm?

Circle **Yes** or **No**.

Was the second line close to 25 cm? Circle **Yes** or **No**.
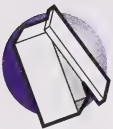
Take your modelling clay or string out of your Math Box.

Without using a ruler, use your modelling clay or string to make snakes the following lengths.

- 5 cm
- 10 cm
- 15 cm
- 20 cm
- 30 cm
- 50 cm
- 75 cm
- 100 cm

When you have finished making your snakes, measure each one.

Which ones were close to the measurement? _____

Were any of them much shorter or much longer than what they were supposed to be?

Circle   **yes**   or   **No.**

Which ones? _____

Centimetre Fun

Lesson 2

Elena and Jasper invited some friends to Elena's house. They were having a sports competition. You can do the events with your home instructor. The first event is the cotton-ball toss.

- Use tape to mark a line on the floor; then stand behind it. Take a cotton ball and toss it as far as you can. First estimate how far it went, and then measure.

Estimate [ ] cm

Measure [ ] cm

- Now your home instructor tosses a cotton ball. Compare that toss with your own. Was it longer or shorter? Estimate how far it went.

Estimate [ ] cm

Measure [ ] cm

Do this two more times. Estimate each toss, then measure the distance. Record the information in the table that follows.

2nd Toss	Estimate of Toss in cm	Measurement of Toss in cm	Order
me			◯
my home instructor			◯

3rd Toss	Estimate of Toss in cm	Measurement of Toss in cm	Order
me			◯
my home instructor			◯

Now go back and number the four measurements from least to greatest in the circles. Number 1 will be the shortest and number 4 will be the longest.

In the circles, have the student put the tosses in order (the shortest toss will be number 1, the longest number 4).

Centimetre Fun

Take two beans out of your Math Box.

If a bean is not available, you could use a pasta such as macaroni or any other small object of suitable weight.

The second event is the bean blow.

• Put a bean behind a line on your desk or a table. Blow the bean as far as you can with one breath. Estimate how far it went and then measure.

Estimate [ ] cm   Measure [ ] cm

• Now your home instructor blows a bean. Compare that blow with your own. Was it longer or shorter? Estimate how far it went.

Estimate [ ] cm   Measure [ ] cm

Do this two more times. Estimate each blow and then measure the distance. Record the information in the chart that follows.

Centimetre Fun

2nd Blow	Estimate of Blow in cm	Measurement of Blow in cm	Order
me			◯
my home instructor			◯

3rd Blow	Estimate of Blow in cm	Measurement of Blow in cm	Order
me			◯
my home instructor			◯

Now go back and number the four measurements from least to greatest in the circles.

For more practice using centimetres, go to the Extension Activities.

Go to Assignment Booklet 6A.

Day 4: Measuring with Decimetres

Today's title might have you wondering what a decimetre is. Jasper wondered just what that, too!

You will be measuring in decimetres today. Decimetres are used for measuring things that are longer than centimetres. You will soon see why.

Get ready for estimating and measuring in decimetres.
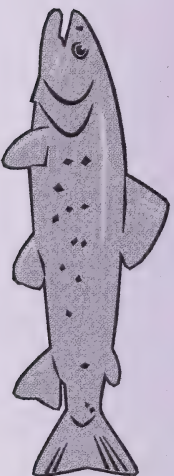
Lesson 1

When Jasper told his mother that he caught a fish thirty-five centimetres long, she said, "That's great. You caught a fish that is over three decimetres." Jasper wondered what his mother was talking about.

This line is one decimetre long.

_____

A decimetre is a **unit** of measurement. Print the name of the unit of measurement you learned about on Day 2.

_____

Measure the decimetre line with your ruler. Is there another way of saying what this length is? Circle **yes** or **no**.

What is it? _____

Now you know. One decimetre is equal to ten centimetres.

Guide the student to answer 10 cm.

Measuring with Decimetres

There are ☐ cm in 1 dm. What do you think **dm** stands for?

Yes, **dm** is another way of writing **decimetre**.

How many centimetres are there in two decimetres? ☐ cm

How many centimetres are there in three decimetres? ☐ cm

How many centimetres are there in six decimetres? ☐ cm

How many centimetres are there in ten decimetres? ☐ cm

Discuss with your home instructor how you figured out the answers to the above questions.

Lesson 2

You will be measuring objects in decimetres. The measurements of the objects here will not always be exact like they were when you measured in centimetres.

Measure this bird's wingspan.
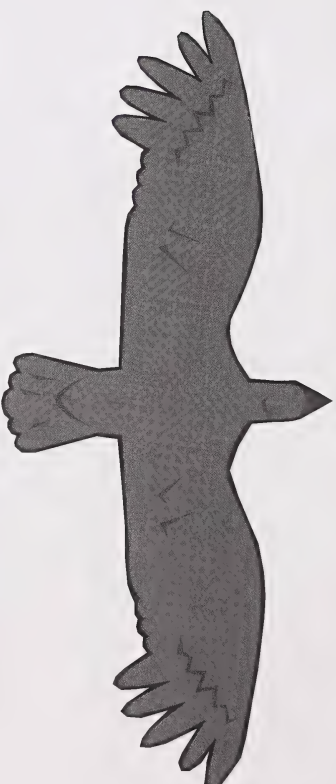
How many centimetres wide is the wingspan? ☐ cm

You know there are 10 cm in one decimetre. But there are 12 cm here. How can you put that into decimetres?

Yes, you round the number to the nearest 10.

The bird's wingspan is about ☐ dm.

Guide the student to round the answer to the nearest ten.

1. Practise rounding these numbers to the nearest 10.

a. 6 cm rounds to ⬚ cm

b. 29 cm rounds to ⬚ cm

c. 77 cm rounds to ⬚ cm

d. 34 cm rounds to ⬚ cm

e. 13 cm rounds to ⬚ cm

f. 98 cm rounds to ⬚ cm

g. 52 cm rounds to ⬚ cm

h. 85 cm rounds to ⬚ cm

i. 41 cm rounds to ⬚ cm

2. Now turn those centimetres into decimetres. Use your answers from the previous exercise.

a.   6 cm rounds to ☐ cm or ☐ dm

b. 52 cm rounds to ☐ cm or ☐ dm

c. 13 cm rounds to ☐ cm or ☐ dm

d. 77 cm rounds to ☐ cm or ☐ dm

e. 41 cm rounds to ☐ cm or ☐ dm

f. 34 cm rounds to ☐ cm or ☐ dm

g. 29 cm rounds to ☐ cm or ☐ dm

h. 98 cm rounds to ☐ cm or ☐ dm

Look around the room. Can you spot three objects that are about 1 dm long? List them.

• _____

• _____

• _____
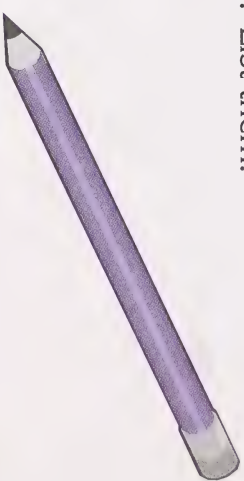
Find three items that measure about 2 dm and list them here.

- _____
- _____
- _____

Find items that measure about 5 dm and list them here.

- _____
- _____
- _____

Find three items that measure about 10 dm and list them here.

- _____
- _____
- _____

Lesson 3

Use decimetres to estimate and then measure the following items. Always write **dm** after each one.

Item	Estimate	Measurement
length of a table		
width of a table		
length from your heel to your waist		
height of a door		
width of a window		
length of your arm from fingertip to shoulder		
length of a book		
distance around your waist		
distance around a garbage can		
your height		
height of a milk carton		
height of your desk		

Measuring with Decimetres

Look at the list of items you just measured. Order the items from smallest to largest.

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

h. _____

i. _____

j. _____

k. _____

l. _____

The longest item is ☐ dm.

The shortest item is ☐ dm.

43
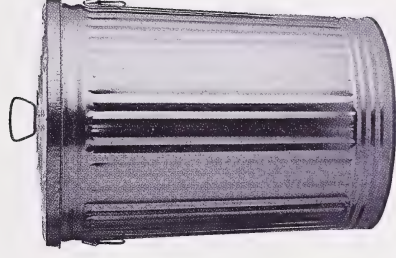
Look at the crayons. Find the ones that are about one decimetre long and colour them green.

Measuring with Decimetres
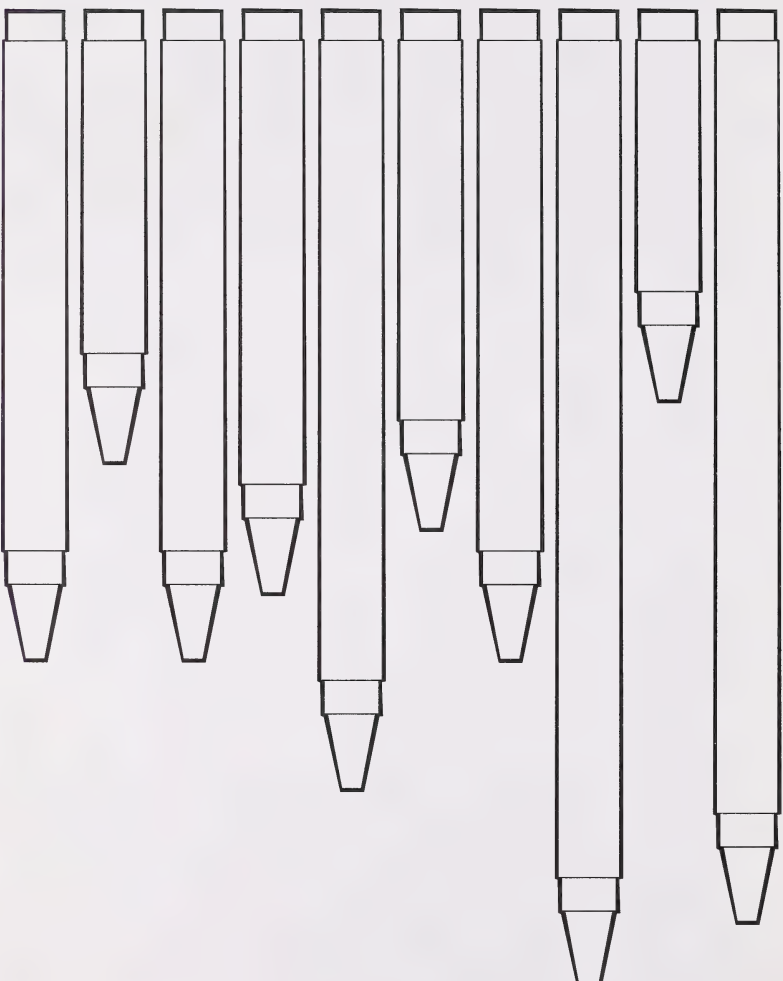
Lesson 4

Take your interlocking cubes and modelling clay or string out of your Math Box.

Snap together as many cubes as you need to make a train three decimetres long. Use your ruler to check.

Estimate the number of cubes you would need to make a train six decimetres long.

Make the train and measure it with your ruler. How many cubes did you use?

Was your estimate a good one? Circle   yes   or   no .

Measuring with Decimetres

Without using a ruler, make snakes with your modelling clay or string in the following lengths.

- 1 dm
- 2 dm
- 3 dm
- 5 dm
- 7 dm
- 8 dm
- 10 dm

When you have finished making your snakes, measure each one.

Which ones were close to the measurement you were making? _____

Were any either much shorter or longer than what they were supposed to be? Circle

Which ones? _____ Make these snakes over again.

yes   or   no.

For more practice using decimetres, go to the Extension Activities.

Go to Assignment Booklet 6A.

Day 5: Measuring with Metres

Yesterday you measured things that were a bit longer using decimetres. What if you had to measure your yard to build a fence?

That would take a lot of decimetres!

There is another unit of measure for these longer distances. What do you think it is called? How long is this unit of measurement?

You will explore this unit of measure and practise measuring with it today.

Lesson 1

Elena and Jasper's home instructor asked them to make a 10 dm ruler. They wondered how to make one. Can you think of a way?

Jasper thought of one way. He suggested cutting strips of paper 1 dm long and taping them end to end to end to make the ruler. Elena agreed that was a good way.

Elena cut out five decimetre strips of paper and Jasper cut out five. Then they taped all ten together end to end. This is what it looked like.

Measuring with Metres
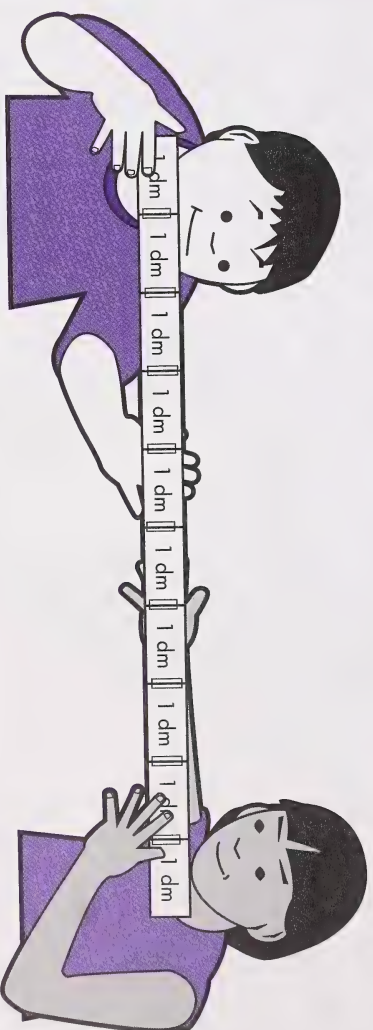
How many decimetre strips did Elena and Jasper put together?

☐

Ten decimetres together make a new measuring unit called a **metre**. It is used to measure longer distances. A shorter way to write metre is **m**.

Lesson 2
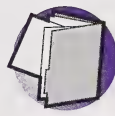
Take two or three sheets of paper out of your folder.

Measure ten decimetre strips on the paper. They should each be ten centimetres long and two centimetres wide. Cut them out.

☐

Place the strips on a metre stick, end to end. How many strips did you need?

How many decimetres are in one metre? ☐ dm

There are ten decimetres in one metre.

Measure one decimetre strip. How many centimetres are there?

☐ cm Each strip is 10 cm long.

If each strip of paper is 10 cm long, and there are 10 strips all together, how many centimetres are there all together on the metre stick?
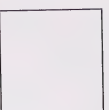
☐ cm

There are 100 cm in 1 m.

Lesson 3

Look around the room you are in. Can you spot any objects that are about one metre long, wide, or high? List three of them.

• _____

• _____

• _____

Have the student count by 10s while pointing to each strip. The total count will come to 100.

Measuring with Metres

Estimate and then measure the following items in metres. Always write m after each one. Underline the longest and shortest items.

Item	Estimate	Measurement
length of a table		
width of a table		
length from your heel to your chin		
height of a door		
width of a window		
width of a door		
height of a shelf		
length of the room you are in		
width of the room you are in		
your height		

Measuring with Metres

You have already measured these items in centimetres. Fill in the centimetre column with the measurements you made on Day 2, Lesson 4. Then measure the items in decimetres and metres. There are some items that you can't measure in metres. Round off if you can.

Item	Measurement in cm	Measurement in dm	Measurement in m
length of this page			
length of your desk			
length of your foot			
distance around your waist			
width of a window			
your height			
height of a milk carton			
height of your desk			

Measuring with Metres

Lesson 4
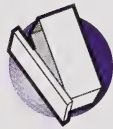
Take your interlocking cubes and modelling clay or string out of your Math Box.

1. Make a one metre train from your cubes or blocks. After you are done, check it with your metre stick.

Is it one metre long? Circle **Yes** or **No**.

If you have enough cubes or blocks, make a two metre long train. Check it with your

metre stick. Is it two metres long? Circle **Yes** or **No**.

2. Make a one metre long snake with your modelling clay or string. Measure it with your

metre stick. Is it one metre long? Circle **Yes** or **No**.

If you have enough modelling clay or string, make a snake two metres long.

Check it with your metre stick. Is it two metres long? Circle **Yes** or **No**.

Go to Assignment Booklet 6A.

Day 6: Which Unit Would You Use?

Now you know about three different units of measurement. You have used centimetres, decimetres, and metres to measure a variety of items.

How do you decide which unit to use? That's what you will find out today. Elena and Jasper have some measurement problems. Maybe you can help solve them.

Which Unit Would You Use?

Lesson 1

Elena's father asked her to help him measure the height of their living room window. They were having new curtains made for that window, and they needed to know how much material to buy. Elena wondered if they should measure the window in centimeters, decimetres, or metres.
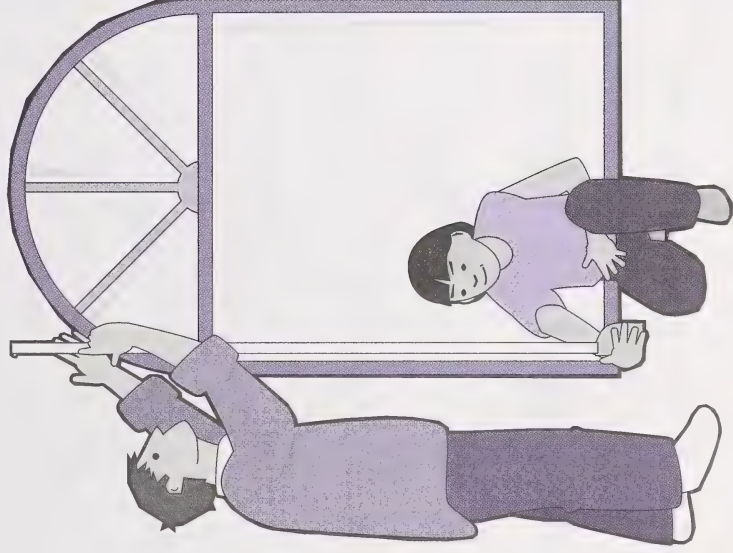
You need to know what unit of measurement is best to use when you measure different things.

For example, Jasper's parents were installing a new fence. They had to measure how much fence they would need.

Should they measure their yard in centimetres?

Circle **Yes** or **No**.

In decimetres? Circle **Yes** or **No**.

Do you think they should measure their yard in metres?

Circle **Yes** or **No**.

Why do you think they would measure the yard in metres?

What would it be like to measure someone's yard in centimetres? Try measuring the length of your room in centimetres using your ruler.

Talk with the student about measuring something as large as a yard with centimetres or decimetres. Have the student measure the length of the room with a ruler.

Which Unit Would You Use?

Now measure the same length of room in metres with your metre stick. Which was easier and quicker to do?

When you have to measure a long distance, or a large object, use metres.

What unit do you think Elena and her father used to measure the height of the window?

_____ Why?

They measured in metres because the object they were measuring was large.

The height of the window measured two metres. They now knew they would have to buy at least two metres of material to make the curtains long enough.

Lesson 2

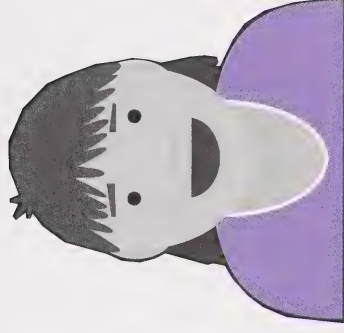Elena wanted to measure her sister's shoulder-length hair. Do you think she would

measure her hair length in metres? Circle **yes** or **no**. Why or why not?

Which Unit Would You Use?

What unit do you think Elena should use to measure her sister's hair length?

_____

Elena measured her sister's hair in decimetres. It was almost three decimetres long.

About how many centimetres long is Elena's sister's hair? ☐ cm

When you have to measure a shorter distance, or a smaller object, use decimetres.

Elena measured her hairbrush. What unit do you think she used? _____ Why?

Elena used decimetres to measure her hairbrush because it is a smaller object. It measured about two decimetres in length.

Lesson 3

Jasper wanted to measure the length of his thumb. Which unit do you think he

should use? _____ Why?

Jasper measured the length of his thumb in centimetres because the distance was short. The length of his thumb measured five centimetres.

When you have to measure a very short distance, or a very small object, use centimetres.

Jasper caught a grasshopper near his home. He asked Elena to hold it while he measured it. Which unit do

you think he used to measure the grasshopper? _____ Why?

Jasper measured the grasshopper in centimetres because it is a small object. It measured four centimetres in length.

Draw a line to the unit you would use to measure each of the following distances. Explain why.

- height of a floor lamp

- distance around your kitchen

- width of this book

- length of your desk

- height of a door

- distance around an apple

- distance around your head

- width of your hand

- length of a car

- height of a cup

(cm)

(dm)

(m)

Have the student explain why he or she chose the particular unit.

Which Unit Would You Use?

Can you think of other objects and distances to measure using centimetres, decimetres, or metres? List five objects, and print which unit you would use to measure them.

Object	Unit of Measure

For more practice measuring in centimetres, decimetres, and metres, go to the Extension Activities.

Go to Assignment Booklet 6A.

Day 7: Cover It Up

While Jasper and Elena were playing with a deck of cards, they wondered how many cards it would take to cover the table. How many cards do you think it would it take?

Today you will make estimates about covering up tables, books, and many other items. After you have made your estimate, you will cover the item to see the actual number needed. You will use many different sizes of materials to cover up many different surfaces. This is another way to measure things.
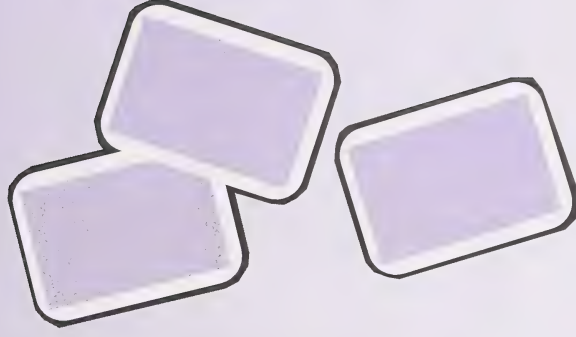
Lesson 1

Jasper and Elena were playing with a deck of cards one evening. Jasper thought it would be fun to spread the cards on the table. He and Elena decided to guess how many cards it would take to cover the table top.
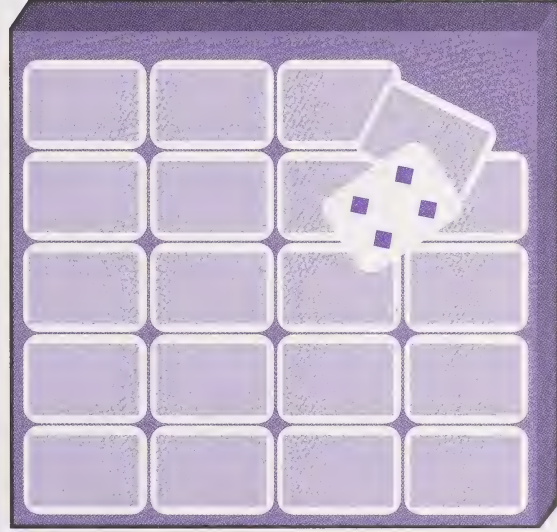
Elena estimated that 40 cards would cover up the table top. Jasper estimated 50. You will try something similar.

Cover It Up

Take the half sheets of paper out of your Student Folder.

Look at the size of the sheets. Now look at the surface of your desk.

How many sheets of paper do you think it will take to cover your desk?

Clear off your work area so there is nothing on your desk.

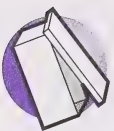Cover your desk with the sheets. Make sure they do not overlap. Now count the sheets.

How many are there? Is the number close to your estimate? Circle **yes** or **no**.

Take your cards out of your Math Box.

Examine the cards. Do you think it will take more or fewer cards to cover your desk than the sheets

of paper? _____ Why?

Take the sheets of paper off your desk. Now cover your desk with the cards and count them. How many

cards are on your desk?

Is that more or fewer than the number of sheets of paper? _____

Jasper and Elena covered their table top with the cards and counted the number. It took 96 cards to cover the table! Both of their estimates were much lower than the actual number. Jasper and Elena realized they needed more practice covering things in order to get better estimates.
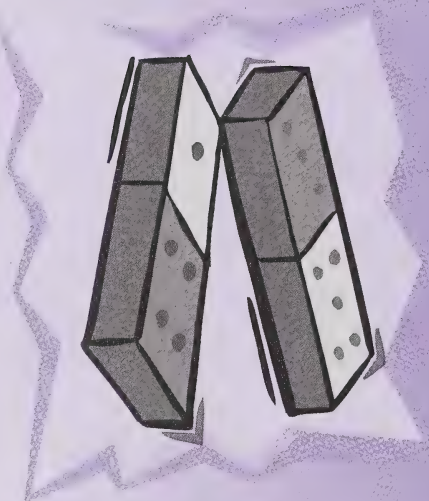
Lesson 2
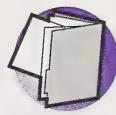
Take a sheet of regular paper from your Student Folder.

Take your dominoes out of your Math Box.

Do you think it will take more dominoes than cards to cover the paper? Circle **Yes** or **No**. Why?

Estimate how many cards it will take to cover the sheet of paper.

Cover the paper with the cards and count them.

How many cards did you use?

[ ]

Was your estimate close? Circle **yes** or **no**.

Estimate how many dominoes it will take to cover the sheet of paper.

[ ]

Count the dominoes. How many dominoes?

[ ]

Take the cards off the paper and cover it with the dominoes.

Was your estimate close? Circle **yes** or **no**.

Take your interlocking cubes from your Math Box.

Discuss why it will take more dominoes to cover the paper.

Estimate how many interlocking cubes it will take to cover the surfaces of different items. Then count and record your answers.

Surface	Estimate	Actual
a book		
your crayon box		
your calculator		

Your home instructor will give you newspaper sheets.

Estimate how many sheets of newspaper it takes to cover different surfaces around your home. Then count and record your answers.

Surface	Estimate	Actual
your bed		
your desk		
the bathroom floor		
the kitchen table		

Assist the student with measuring the larger objects.

Cover It Up

You will cover a number of surfaces with different items. Estimate how many of each item it takes to cover the surfaces listed. Which item does it take more of to cover the surface?

Surface to be covered	Items to cover it with	Estimated Number	Actual Number	Which item takes more?
a cereal box	cards			
	dominoes			
a half sheet of paper	interlocking cubes			
	dominoes			
your Assignment Booklet	interlocking cubes			
	dominoes			

Day 8: Different Shapes

Jasper and Elena always enjoy working with shapes. Just like them, you will make new shapes using squares, triangles, and rectangles.

You will begin by putting four squares together to make different kinds of shapes. Each shape you make will be different, but each will cover the same amount of space on your desk.

Then you will use triangles and rectangles in the same way.

See how creative you can be making different shapes!
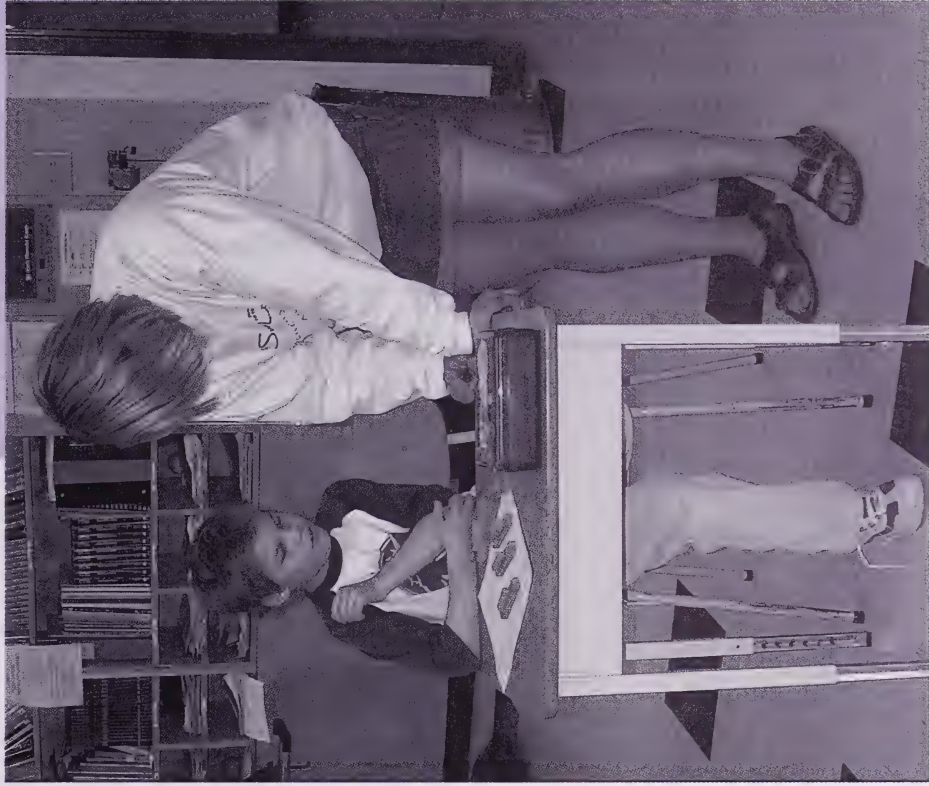
Lesson 1

Elena was playing with her shapes. She discovered that by putting four squares together, she could make many different shapes. The shapes are different, but they cover the same amount of space.

Here is the first shape she made using four squares.

Jasper made a shape with his squares that looked like this.
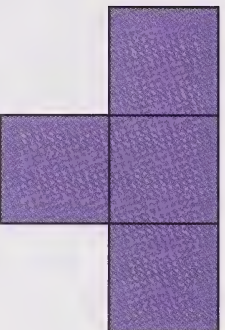
Jasper made a shape with his squares that looked like this.
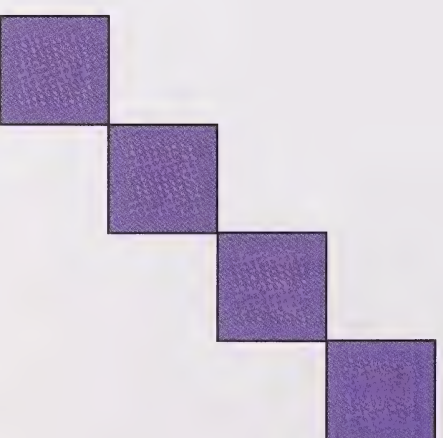
This is another shape Elena made with four squares.
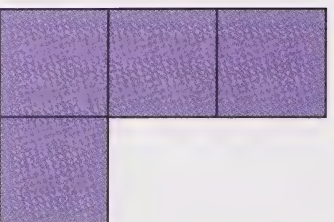
All the shapes were very different, but Elena and Jasper knew they all covered the same amount of space.

Different Shapes

Lesson 2
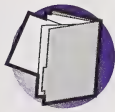
Take squares out of your Student Folder.

Try to make four different shapes using four squares each time. Draw the shapes you make in the box. See how they look different, but remember they cover the same amount of space.
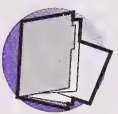
Take triangles out of your Student Folder.

Try to make four different shapes using four triangles each time. See how they look different, but remember they cover the same amount of space. Draw the shapes you make in the box.
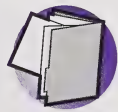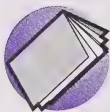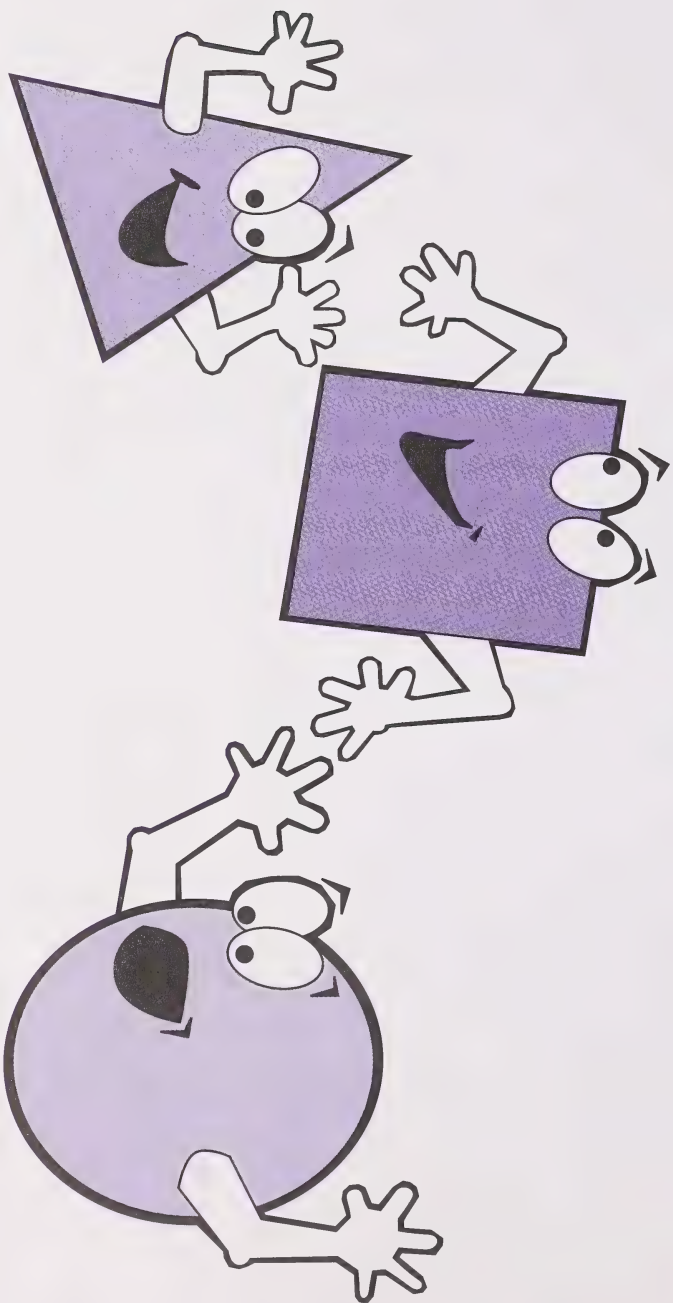
Different Shapes

Take rectangles out of your Student Folder.

Try to make four different shapes using four rectangles each time. See how they look different, but they cover the same amount of space. Draw the shapes you make in the box.

Different Shapes

For more practice working with shapes, go to the Extension Activities.

Go to Assignment Booklet 6A.

Day 9: Fill It Up

Sometimes you need to know how much a container will hold. This is a different kind of measurement.

Elena's mother has a problem for Elena to solve.

You, too, will get to experiment with estimating and filling containers of various sizes.

If you're not careful, you might get a bit wet!

Lesson 1

Elena's mother was planning a birthday party for Elena's father. She asked Elena to help her. She told Elena that there would be eight adults at the party, so she needed a pitcher to hold enough punch for eight people. Elena went to the cupboard to look for a pitcher. She found two. One pitcher was bigger than the other. She wondered which one would hold eight glasses of punch.
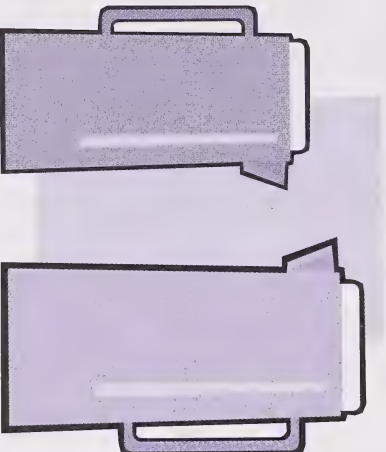
What do you think Elena should do to find out which pitcher holds eight glasses of liquid?

Elena decided to conduct an experiment. She put both pitchers on the table. Then she got a glass. Elena filled the glass with water and poured it into one of the pitchers. She kept doing this until she filled each pitcher with as much water as it could hold. She kept a tally of the number of glasses.

Elena found that the blue pitcher held six glasses of water, and the red one held ten glasses of water. Which pitcher do you think Elena used for the party, the blue pitcher or the red pitcher?

Discuss methods of finding out which pitcher can hold eight glasses of liquid.

B

A

Lesson 2

Look at the two containers on your desk. Which one do you think can hold more? How can you find out which one holds more?

You can conduct an experiment like the one Elena did. Take your containers to a sink.
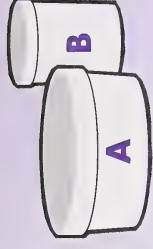
Put a margarine tub marked A and a yogurt or ice cream container marked B on the student's desk.

Your home instructor will give you a cup to use. Look at the cup and then look at Container A. How many cups of water do you think it
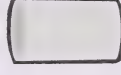
Give the student a small cup to fill the containers.

will take to fill it?

Start filling Container A with water. Make sure you fill the cup almost to the brim. Your home instructor will keep a tally of your count.

Tally for Container A

Count the tally marks. How many cups did it take to fill Container A?

Was that number close to your estimate? Circle **yes** or **no**.

Look at Container B. How many cups of water do you think it will take to fill it?

Start filling Container B with water. Your home instructor will keep a tally of your count.

Tally for Container B

Count the tally marks.

How many cups did it take to fill Container B?

Was that number close to your estimate?

Circle **yes** or **no**.

Which container holds more? _____

Did you think it would? Circle **yes** or **no**.

Lesson 3

Look at the five different containers and the pail. One at a time, estimate how many of each container you think it will take to fill the pail with water. Record your estimates in the chart.

Then fill the pail with each container. Your home instructor will keep a tally. Record the actual number for each container on the chart.

Now order the containers from least to most. The one that took the least number of containers to fill the pail will be number 1.
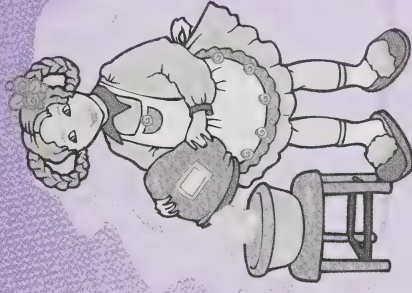
Have a jam jar, baby-food jar, juice box, soup can, milk carton, and ice-cream pail or other large container ready. Use rice, sand, or bird seed if you prefer not to use water.

Tally for Jam Jar	Tally for Milk Carton

Tally for Baby-food Jar	Tally for Soup Can

Tally for Juice Box

Container	Estimate	Actual	Order
jam jar			◯
baby-food jar			◯
juice box			◯
milk carton			◯
soup can			◯

Have the student explain why there are differences in the numbers. The containers are of different sizes and hold different amounts of water.

Which container was filled the least? _____

Which container was filled the most? _____

Why are there differences in the numbers? _____

Which container holds the least? _____

Which container holds the most? _____

Use the graph on the next page to chart the measurements you just made. Starting from the bottom, fill in a rectangle for each time the container was used to fill the pail. Use a different colour for each container.

How many of these containers fill a pail?

	Jam Jar	Baby-food Jar	Juice Box	Milk Carton	Soup Can
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Use the graph to circle the right answer.

- It took   *fewer*   *more*   soup cans than juice boxes to fill the pail.

- It took   *fewer*   *more*   baby-food jars than jam jars to fill the pail.

- It took   *fewer*   *more*   milk cartons than soup cans to fill the pail.

- It took   *fewer*   *more*   jam jars than soup cans to fill the pail.

For more practice filling and measuring containers, go to the Extension Activities.

Do you ever go grocery shopping? Have you ever noticed how some things are very heavy and others are quite light?

Can you estimate which is heavier, a box of cereal or a bag of apples?

How do you measure the weight of objects?

Have you ever weighed yourself? How did you do it?

Today you will use a different scale. It's called a balance scale.

Are you ready to see how this special scale works?

How Heavy Is It?

Elena was shopping for groceries with her father. He asked her to get a head of cabbage and a red pepper. Elena got the red pepper first, then went to get the cabbage. When she lifted the head of cabbage, she noticed how much heavier it was than the red pepper. She could carry the red pepper in one hand, but she had to use both hands to carry the cabbage back to the grocery cart.

You know some objects are heavier than others, and some objects are lighter than others.

Look at the book and scissors your home instructor put on your desk.

Which object do you think is heavier? _____

Why? How can you find out which one is heavier?

Pick up the scissors in one hand and the book with the other hand.

Which is heavier? _____

You know the book is heavier because it feels heavier. It weighs down your hand.

Lesson 2

Look at the five objects your home instructor has placed on your desk. Do not touch them.

Which object do you think is the heaviest?

_____ Why?

Give the student a heavy book and a pair of scissors. Discuss which would be heavier and why.

Place five objects of different weights on the student's desk. The student is to compare them at first by observation.

Which object do you think is the lightest?

_____ Why?

How can you check to find out which objects are heavier than the others?

You can hold each object to feel the weight. There is another, more accurate way of measuring weight. Do you know what that is?

You can use a scale to measure weight. You may have a scale in your bathroom. You may have seen a scale in your doctor's office. You will be using a scale that is different from both of those—a balance scale.

Lesson 3

Do you know what a balance scale is used for?

A balance scale is used to weigh an object. You can also use it to compare the weight of two objects. Sometimes you can tell which object is heavier just by holding it, like you did in Lesson 1. There are times, however, when two objects feel almost the same in weight. A balance scale can show you which one is heavier.

Guide the student to think about weighing the objects using a scale.

Take the two lightest objects from Lesson 2. Place one object in one pan and the other object in the other pan of the scale.

What happens? Why do you think one pan of the balance is hanging lower?

If you switch the objects, which pan do you think will hang lower this time?

What does that tell you about the weight of the two objects?

Lesson 4

You compared the weight of two objects in the last lesson. Now you will weigh five objects. Begin by writing the names of the five objects you will weigh in the first column of the following chart. Look at the objects and predict the order from lightest to heaviest by numbering them in the second column.

Weigh each of the objects on your balance scale. Your home instructor will show you how.

Guide the student to answer that the pan with the heavier object goes down because the object is heavier. That means the object in the pan that is higher is lighter.

Switch the two objects so that they are in different pans.

Show the student how to weigh an object on the balance scale as indicated in the Home Instructor's Guide. Explain why it is called a balance scale.

How Heavy Is It?

As you weigh each object, write the number of interlocking blocks it takes to balance the objects in the third column. In the last column, number the objects from lightest to heaviest according to their actual weight.

Object	Predicted Order	Number of Rods or Blocks Used	Actual Order

How Heavy Is It?

Now look at the chart and compare the predicted order to the actual order.

Were your estimates correct? Circle **yes** or **no**.

Why do you think that is?

Which is the heaviest object? _____

Which is the lightest object? _____

Which is the second lightest object? _____

Which is the second heaviest object? _____

The _____ is heavier than the _____.

The _____ is lighter than the _____.

How Heavy Is It?

Make a graph for the measurements you just made. Print the names of the objects at the bottom of the columns. Fill in a rectangle for each block or rod used to balance an object. Use a different colour for each object.

How many blocks balance an object?

15					
14					
13					
12					
11					
10					
9					
8					
7					
6					
5					
4					
3					
2					
1					

When you were born, you were measured to see how long you were. You were also weighed. All babies are weighed and measured that way.

Can you tell how much something weighs by only looking at it? It can be tricky, can't it?

Are some small objects heavier than some big objects?

Are babies heavy or light?

See what Jasper concluded about his baby cousin.

Lesson 1

That Weighs How Much?

Jasper was visiting his aunt and uncle in Kelowna, B.C. They just had a baby boy—Jasper's new cousin! Jasper was so happy to see him. He asked his aunt if he could hold his baby cousin. When his aunt put the baby in Jasper's arms, Jasper was surprised how heavy he was. He wondered how a little baby could weigh so much.

It isn't always easy to tell how much something weighs just by looking at it.

Look at the two containers on your desk. Do not touch them. Do you think they weigh the same? Why or why not?

Lift each container. What do you think now?

Place two equal-sized containers with lids on the student's desk. One will be half full, the other full. After the student holds each container, discuss how you often can't tell what things will weigh just by looking at them.

Lesson 2

Do you think a small object can be heavier than a large object?

Circle **Yes** or **No**. Explain your answer.
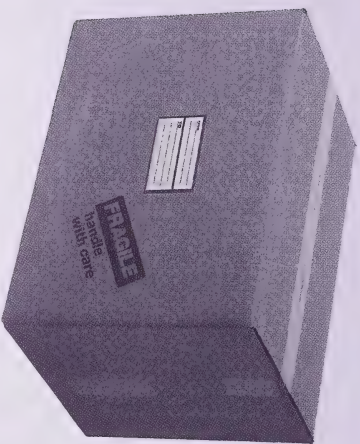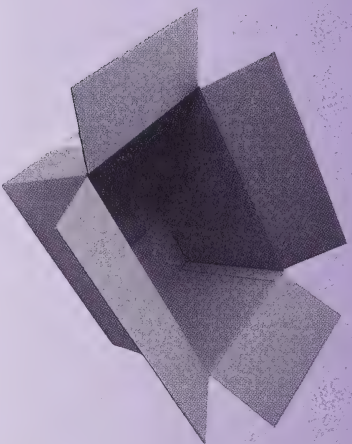
When Jasper lifted his baby cousin, he was surprised at how heavy he was. He had just helped his uncle carry big, empty boxes to the basement. Some of the boxes he carried were much bigger than the baby. But they were much lighter. He had no problem lifting the boxes. That's why Jasper couldn't believe the baby was so heavy. The baby was much smaller than the boxes, yet much heavier.

When he came back home, Jasper told Elena about the boxes and his baby cousin. They decided to do some experimenting of their own.

They looked for small, heavy objects and large, light objects.

Look around you. Look in the room you are in, in other rooms, and even outside. Can you find small objects that are heavier than some large objects? Try to find seven objects, some large and light and some heavy and small.

Assist the student in finding these.

That Weighs How Much?

Have the student place each object in one of the pans on the balance scale.

Take one of the objects you found that is small and heavy. Take another object that is larger and you think is lighter.

Compare their weights on a balance scale to see whether you are right.

Which object is heavier?

Is it the smaller object? Circle **yes** or **no** .

Were you right in thinking the smaller object is heavier than the larger one? Circle **yes** or **no** .

Weigh and compare the other objects you found.

Then fill out the chart that follows by printing the names of small, heavy objects under that heading. Then across from each of them, print the names of larger, lighter objects.

Small, Heavy Objects	Larger, Lighter Objects

Is a larger object always heavier than a smaller object? Circle **Yes** or **No**. Tell your home instructor why or why not?

For more practice comparing the weights of objects, go to the Extension Activities.

Go to Assignment Booklet 6B.

Day 12: Hot and Cold

You have now used different types of measurements to tell length, height, size and shape, as well as weight of objects. Would you believe there are still other measurements to investigate?

When you go outside to play, you need to know how hot or cold it is. Why does it help to know if it is hot or cold outside?

Just as a balance scale can help you compare weights, there is an instrument you can use to tell if it is hot or cold. Do you know what that instrument is called? Can you think of other situations when it is good to know if it is hot or cold?

Lesson 1

Elena and Jasper were cross-country skiing one weekend in Prince Albert National Park, Saskatchewan. It felt quite cold outside. Jasper wondered how cold it really was because he wanted to know which winter jacket to put on.

What could Jasper do to find out which jacket to wear?

Yes, he could find out what the temperature was. But how would he do that?

Jasper could find the outdoor temperature by looking at a thermometer.

Have you ever seen a thermometer? Circle **yes** or **no**.

Take the thermometer out of the Math Box.

Hot and Cold

Look at the thermometer. A thermometer is used to measure temperature. It measures whether something is hot or cold, or in-between.

Think of some things a thermometer is used for.

A thermometer is used to measure the temperature of many different things.

Discuss things a thermometer is used for: body temperature, outside and inside temperatures, heat in an oven, meat and candy thermometers, and so on.

Hot and Cold

List at least three things you know a thermometer measures.

• _____

• _____

• _____

Lesson 2

Elena told Jasper to look at the thermometer outside their rooms to see what temperature it was. Jasper did, but he didn't know how to read the temperature. Elena read the thermometer and told Jasper it was −12°C. That means it was minus twelve degrees Celsius. They now knew they had to dress warmly for their outing.

Elena showed Jasper how to read a thermometer. Now you can try reading yours.

Look at your thermometer. There is a special liquid in the bulb. When it gets hot, the liquid rises. When it gets cold, the liquid falls. There are numbers on the side and these tell you what the temperature is. When you talk about temperature, the numbers are called degrees. Degrees are marked in Celsius, which is a special kind of scale used to measure degrees. When you see a capital C, it means Celsius and the symbol ° means degrees. Read the degrees on the thermometer, starting at 0, going up to 100.

Hot and Cold
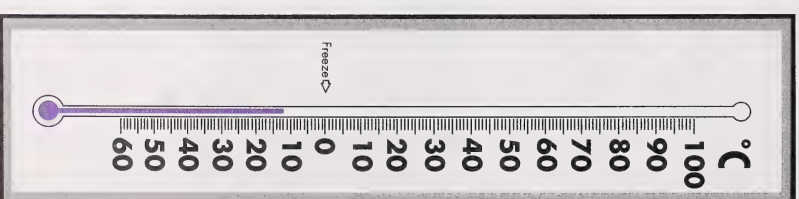
On most thermometers, the degrees go up to 100 and down to –60. When it is 100 degrees it is very, very hot and when it is –60 degrees it is very cold. The temperature in your room is probably about 20 degrees.

Your normal body temperature is about 37°C. A nice day in the summer is about 23°C. A cold day in the winter is about –20°C.

When the temperature is cold, the liquid in the thermometer is low. When the temperature is hot, the liquid in the thermometer is high.

Have you ever watched someone boil water for tea or coffee? Have you watched an egg boil? The temperature of that water is 100 degrees Celsius! That is very hot. Water boils at 100°C.

Find the temperatures mentioned on this page on your thermometer.

°C
100
90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60

Freeze

Lesson 3

Look at the four thermometers. Each one shows a different temperature. Look at each one and tell your home instructor whether the temperature it shows is hot or cold.
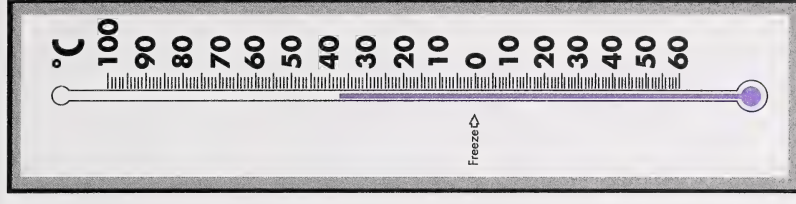
Have the student tell you what each thermometer shows.
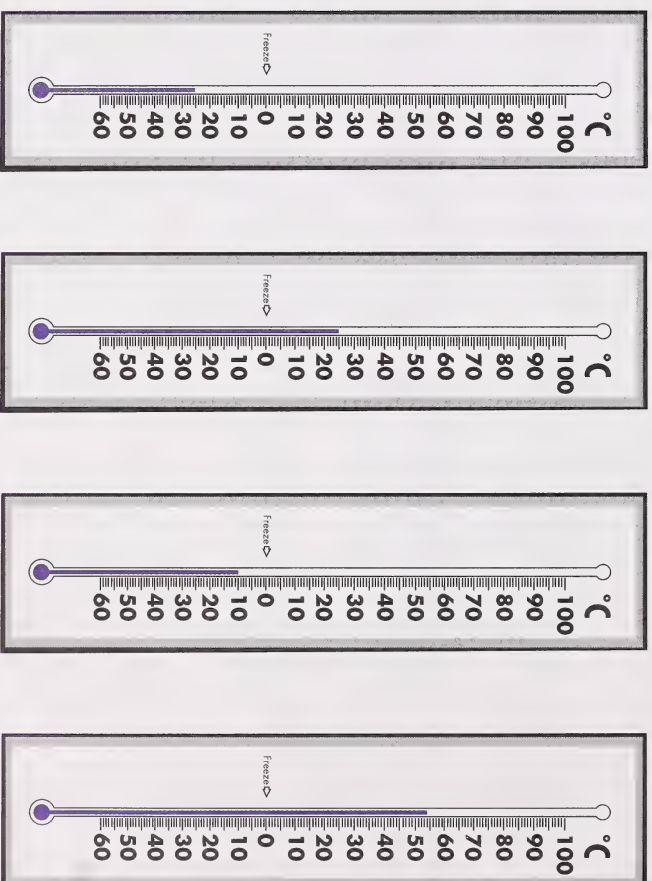
Lesson 4

Look at your thermometer. Read the temperature.

Prepare containers of cold water with lots of ice in it, hot tap water, and cold tap water.

What is it? ☐ °C

Put the thermometer into the container of hot tap water. Let it sit there for a minute. Then read the temperature.

What does it say now? ☐ °C

Did the temperature rise or fall? _____

Explain why you think that happened.

Put the thermometer into the container of cold tap water. Let it sit there for a minute. Then read the temperature.

What does it say now? ☐ °C

Hot and Cold

Did the temperature rise or fall? _____

Explain why you think that happened.

Put the thermometer into the container of ice water. Let it sit there for a minute. Then read the temperature.

What does it say now? ☐ °C

Did the temperature rise or fall? _____

Explain why you think that happened.

Take the thermometer out of the ice water and place it on a counter. How many minutes do you think it will take for the temperature to reach 10°C? ☐

How many minutes do you think it will take for the temperature to reach 20°C? ☐

Hot and Cold

Assist the student with timing how long it takes for the temperature to rise.

Watch the thermometer as it rises and record how long it took to reach 10°C and 20°C.

time it took to reach 10°C [ ] minutes

time it took to reach 20°C [ ] minutes

Were your estimates good ones? Circle **yes** or **no**.

Prepare another container of hot tap water.

Now put the thermometer back into a container of hot water. Let it sit there for a minute. Then read the temperature.

What is the temperature? [ ] °C

How many minutes do you think it will take for the thermometer to reach 30°C if you let it sit in the container of hot water? [ ]

Have your home instructor write the time you put the thermometer into the hot water. Keep watching the thermometer as the temperature falls. When it reaches 30°C, have your home instructor check the time.

How many minutes did it take for the water to reach 30°C?

Was your estimate a good one? Circle **yes** or **no**.

Why did the temperature of the water fall?

_____

• What happens to the thermometer when you put it into something cold?

• What happens to the thermometer when you put it into something hot?

_____

The answer is that the water cooled, and the temperature falls when it gets cooler. For the next questions, guide the student to answer that the temperature falls when it gets cooler and rises when it gets warmer.
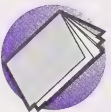
Go to Assignment Booklet 6B.

Day 13: Quarter Time

Counting money is important when you go to buy something. The coins you use are a form of measurement.

Do you have a bank for saving money? Can you count how much money you have in that bank?

You will begin today by helping Elena count her money. She wants to buy her friend a gift.

First you need to know how much a nickel, a dime, and a quarter are worth.

Yes, it's quarter time!

Lesson 1

Elena wanted to buy her friend Oksana a gift for her birthday. She took out the coins she had in her piggy bank. This is what she had.
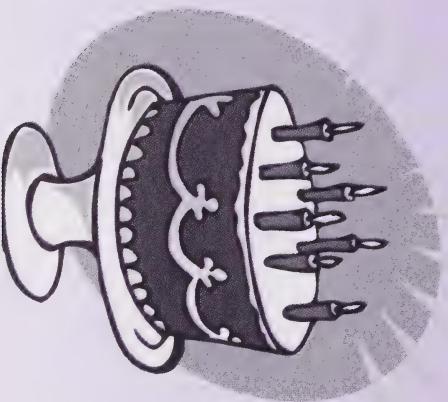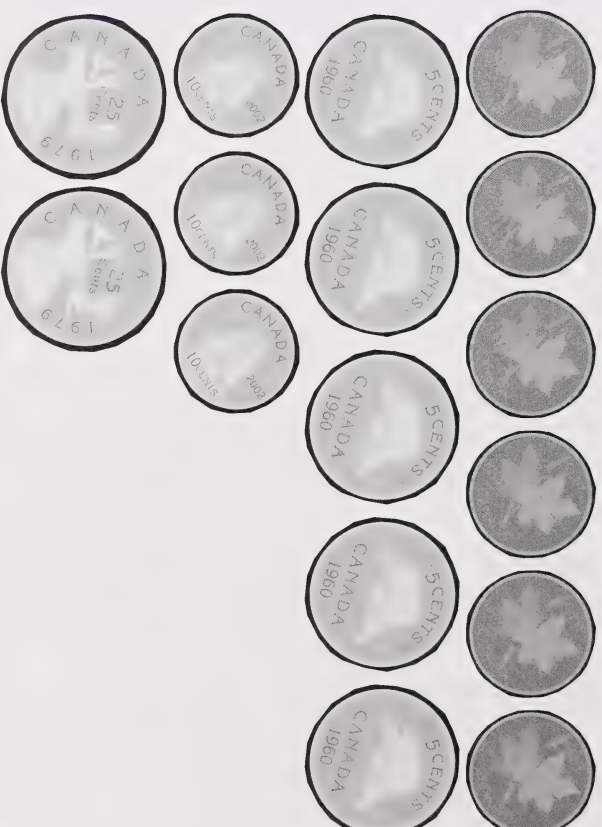
She counted out the six pennies: one, two, three, four, five, six; the five nickels: five, ten, fifteen, twenty, twenty-five; and the three dimes: ten, twenty, thirty. When she got to the last coins, she wasn't sure how to count them.

Do you know what they are? _____

Those are **quarters**. Do you know how much one quarter is worth? Circle

Yes   or   **No**.

One quarter is worth 25 cents. Do you remember the symbol for cents?

What is it? _____

The symbol for cents is ¢. 1 quarter=25¢

What is one quarter worth? _____

Lesson 2
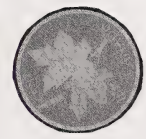
What is this coin called? _____ or [   ] ¢

What is this coin called? _____ or [   ] ¢

What is this coin called? _____

What is it worth? ☐ ¢

Using the coins on your desk, show a set of coins that are worth three cents.

Draw the coins in the box.

The student shows 3 pennies.

Give the student the play money, paper coins, or real coins.
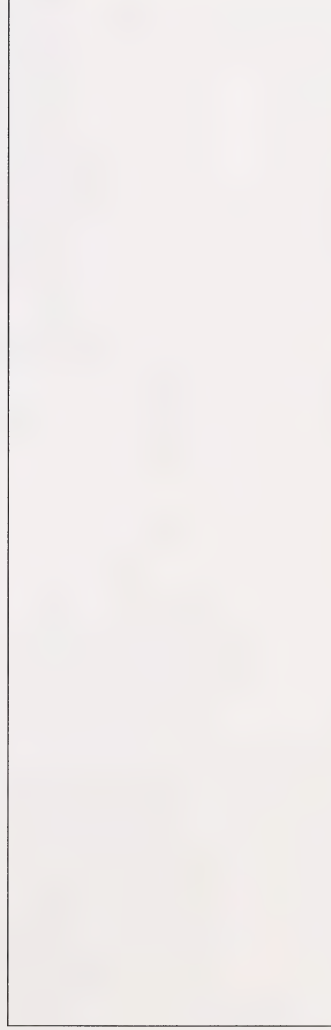
With your coins, show a set of coins that is equal to the value of a nickel.

Draw the coins in the box.

The student shows 5 pennies.

With your coins, show a set of coins that is worth 8¢.

Draw the coins in the box.

The student shows either 8 pennies or 1 nickel and 3 pennies.

The student shows either 8 pennies or 1 nickel and 3 pennies.

Now with your coins, show a different set of coins that is worth 8¢.

Draw the coins in the box.

The student shows either 10 pennies or 1 nickel and 5 pennies or 2 nickels.
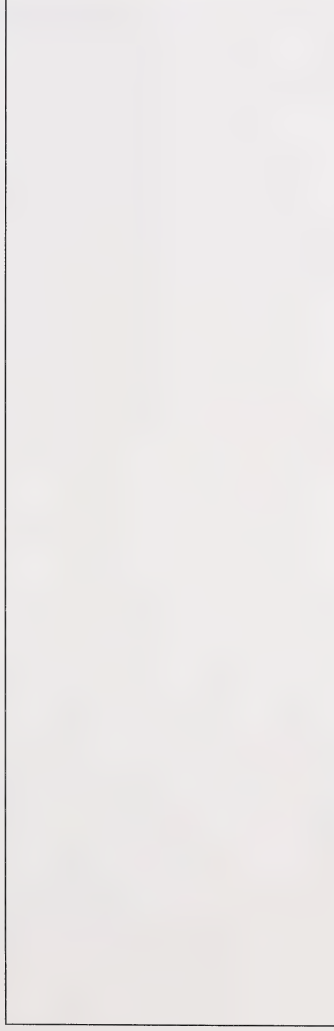
With your coins, show a set of coins that is equal to the value of one dime.

Draw the coins in the box.

Quarter Time

Now show a different set of coins that is equal to the value of one dime.

Draw the coins in the box.

Put a nickel and dime together. What is their worth?

⬚ ¢

The student can show any of the following:
15 pennies; 3 nickels; 2 nickels and 5 pennies; or 1 nickel and 10 pennies.

Is there another way of showing coins worth 15¢?

Circle **Yes** or **No**. In fact, there are at least three other ways. Show three sets of coins that are worth 15¢. Then draw the sets in the boxes.

Quarter Time

Put two dimes together.

What is their worth? [ ] ¢

Is there another way of showing coins worth 20¢?

Circle **yes** or **no**.

The student can show any of the following:
20 pennies; 4 nickels; 2 nickels and 10 pennies; 1 nickel, 1 dime and 5 pennies; and so on.

There are many ways. Show three sets of coins that are worth 20¢. Then draw the sets in the boxes.

Make sure the student has a clear understanding of these three coins before going on.
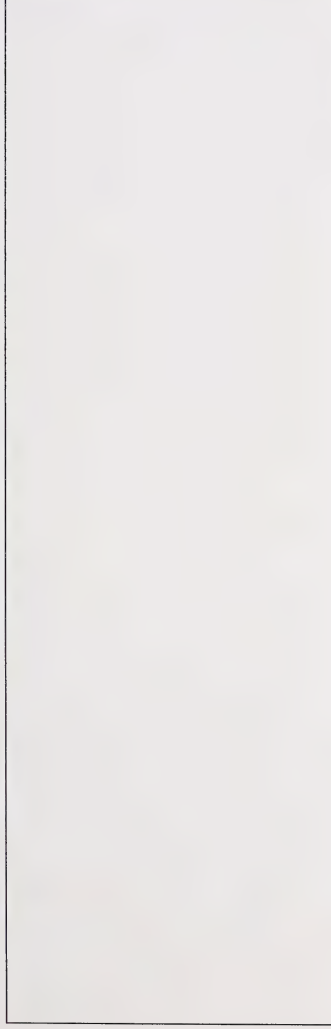
Lesson 3

You have just reviewed the value of pennies, nickels, and dimes.

What is a quarter worth? ☐ ¢

Yes, a quarter is worth 25¢.

How many pennies are equal to 25¢? ☐

How many nickels are equal to 25¢? ☐

Draw five nickels.

Count the nickels by five.

How much did you get? ☐ ¢

Why do you think you counted the nickels by five?

You know 25 pennies = 25¢. You know 5 nickels = 25¢. How many dimes = 25¢?

Two dimes = _____ ¢   Three dimes = _____ ¢
You know this because you counted by tens.

If two dimes = 20¢, and three dimes = 30¢, how can you get 25¢?

Can you think of a way? What is it?

_____

Discuss the value of a nickel (5¢), and how
counting nickels five times = 25¢.

Discuss using other coins to make a value of
25¢. Brainstorm what coins to use in
addition to the two dimes.

With your coins, show a set that is worth 25¢. Draw the set in the box.

There are many other ways of showing coins worth 25¢. With your coins, show ten sets of coins that are worth 25¢. Draw four of the sets in the boxes.

The student can show any of the following: 25 pennies; 5 nickels; 2 dimes and 5 pennies; 1 dime and 15 pennies; 4 nickels and 5 pennies; 3 nickels and 1 dime; 2 nickels, 1 dime, and 5 pennies; 1 nickel and 20 pennies; 1 nickel, 1 dime and 10 pennies; and so on.

Day 14: Guess How Much

It's time to estimate how much a set of coins is worth. After estimating, you'll get to count the actual amount.

Are you ready to use pennies, nickels, dimes, and quarters?

When you finish today, you will be much better at counting your money.

Lesson 1

Jasper told Elena he had a lot of money in his hand. Elena opened his hand and told her to guess. From what Elena saw, she guessed Jasper had about 20¢. Jasper was surprised. He said, "Is that all I have? But it looks like so much!" Jasper had many coins in his hand, but they were all pennies.

Look at these coins.
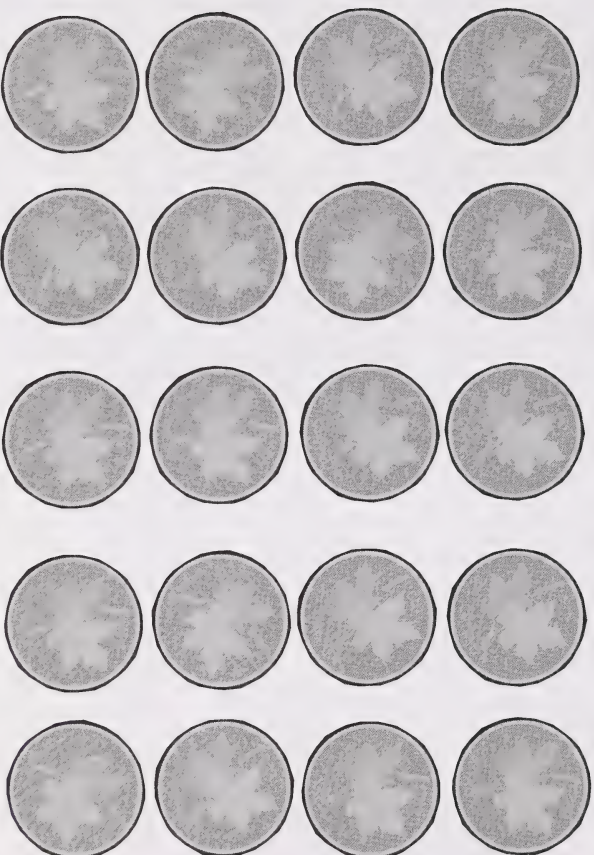
What are they? _____

Estimate how many there are.

[ ]

Look at these coins.
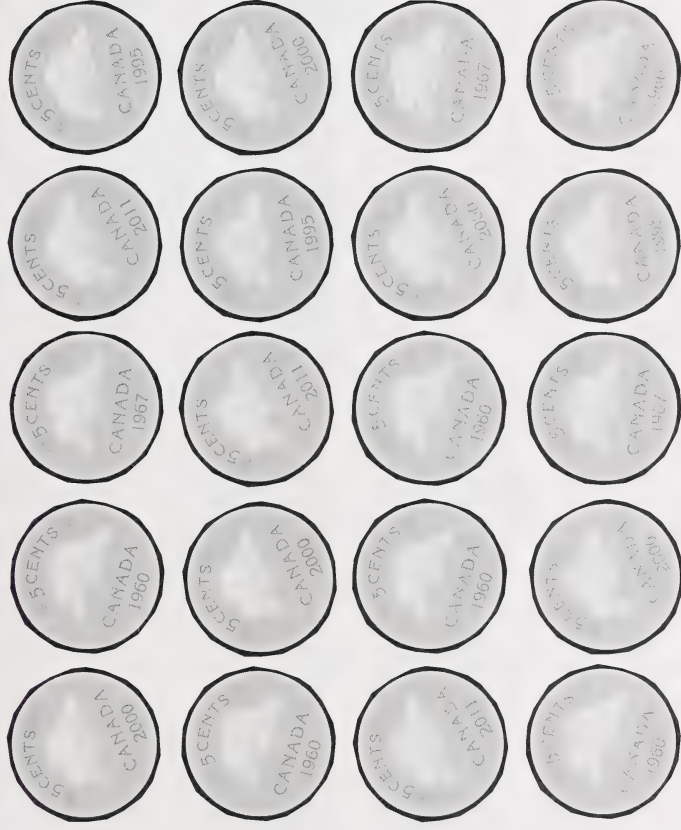
What are they? _____

Estimate how many there are.

[ ]

Count the pennies. How many are there?

Was your estimate a good one? Circle **yes** or **no**.

Count the nickels. How many are there?

Was your estimate a good one? Circle **yes** or **no**.

Would you rather have twenty pennies, or twenty nickels? _____

Jasper thought he had a lot of money because he had many coins in his hand. He didn't realize that those coins were pennies and not worth as much as other coins.

Guess How Much

Lesson 2

Look at this set of coins, but don't count the value. Estimate how much money you think is here. Remember to print ¢.

Estimate	Actual

Now count the value of the coins and print the actual amount on the chart.

Was your estimate a good one? Circle **Yes** or **no**.

1. Estimate the value of the following sets of coins. Record your estimate. Then count them and record the actual value.

a.
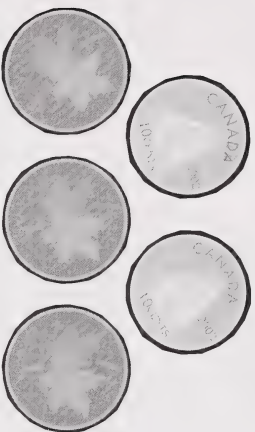
Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.
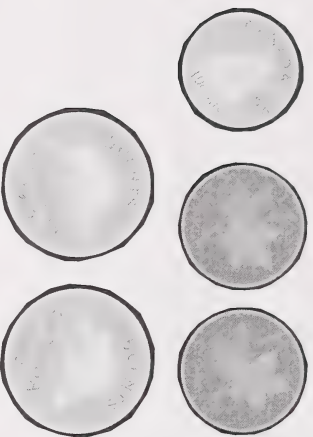
b.

Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.
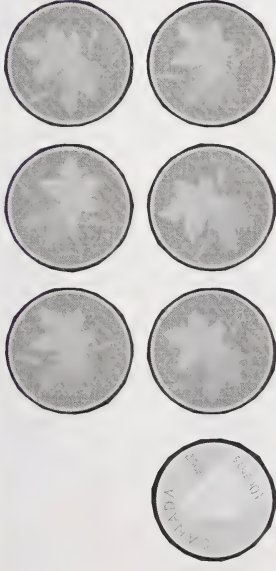
Guess How Much

c.

Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.

d.
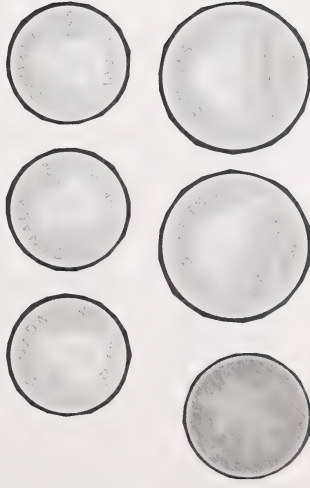
Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.

Put the sets, one at a time, on the student's desk.

Your home instructor will put sets of coins on your desk. Do not count them until after you have made your estimate. Print the estimate and actual value on the charts below. Do not forget to print ¢ after the number.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Lesson 3

Estimate on the following chart the number of each type of coin that will fit on the square.

To start, estimate the number of pennies that you think will fit into the square. Put that number in the chart. Then cover the square with pennies and record the actual amount.

Assist the student to begin with the pennies.

Then fill out the chart in the same way using nickels, dimes, and quarters.

	Estimate	Actual
pennies		
nickels		
dimes		
quarters		

Were your estimates good ones? Circle **yes** or **no**.

What is the worth of the pennies you had on the square? ▢ ¢

What is the worth of the nickels you had on the square? ▢ ¢

What is the worth of the dimes you had on the square? ▢ ¢

Guess How Much

Circle the sets of coins that are equal to 16¢.

Guess How Much
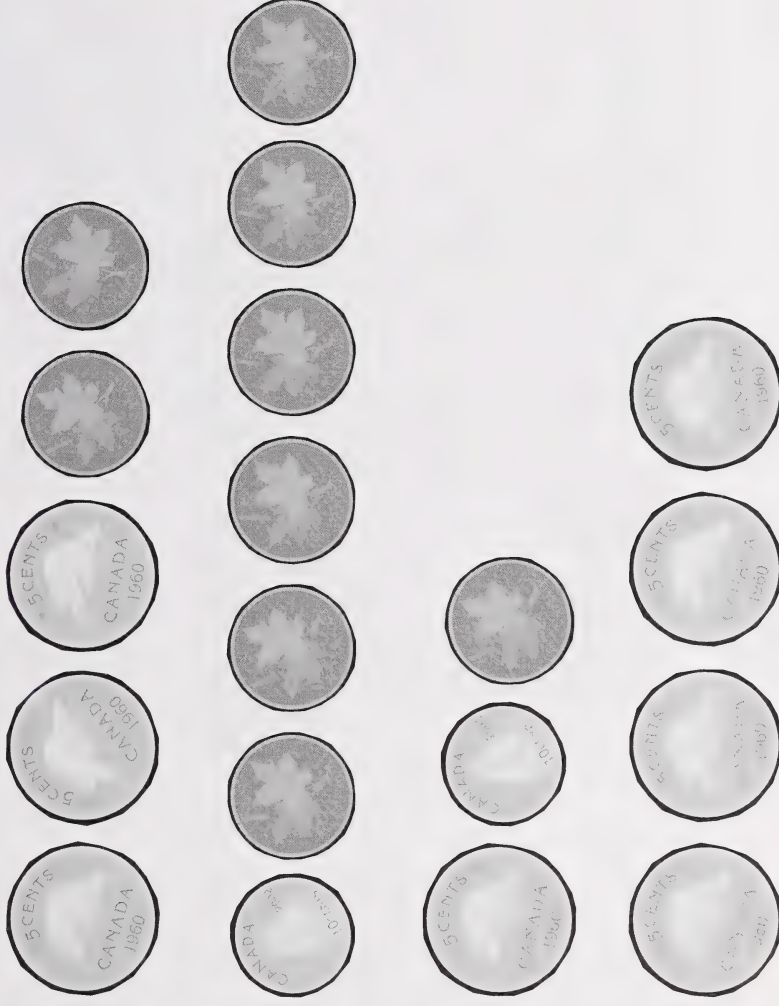
Circle the sets of coins that are equal to 24¢.
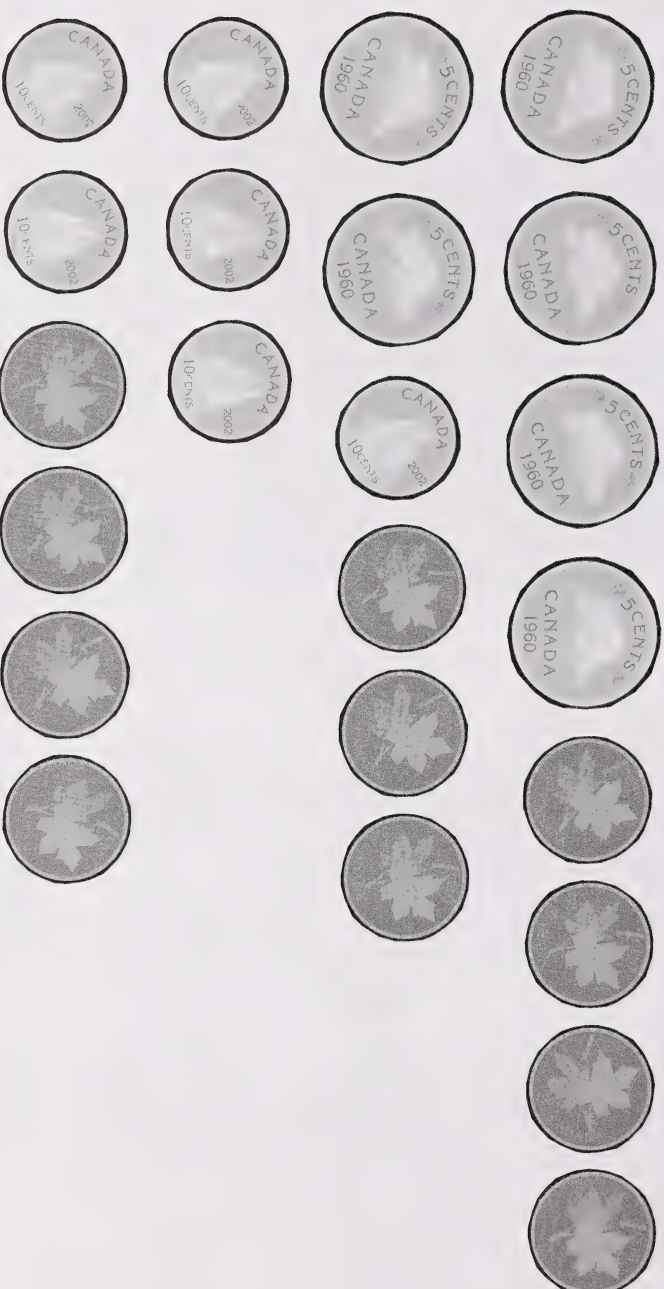
For more practice counting money, go to the Extension Activities.
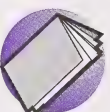
Go to Assignment Booklet 6B.

Day 15: Counting Coin Collections

Now you know that different collections of coins can be worth the same amount. It's time to explore even more coin collections.

First, you will review quarters and see how quickly you can count by 25s to 100. This practice with many different coin collections makes it even easier to count your money and help Elena count her money.

Lesson 1

Remember when Elena wanted to buy her friend Oksana a gift for her birthday? These are the coins she had in her piggy bank.
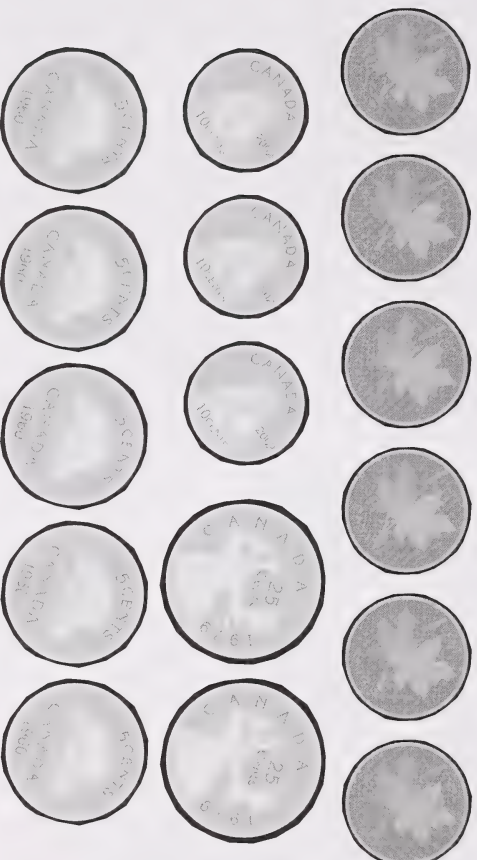
She knew how to count the pennies, nickels, and dimes, but got stuck at the quarters.

Counting Coin Collections

What is this coin called? _____

What is it worth? [ ] ¢

Here are two quarters.

If one quarter is worth 25¢, what is the value of two quarters?

[ ] ¢.

Guide the student to answer 25 + 25.

Lesson 2

Solve these equations:

25	50	75
+ 25	+ 25	+ 25
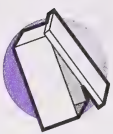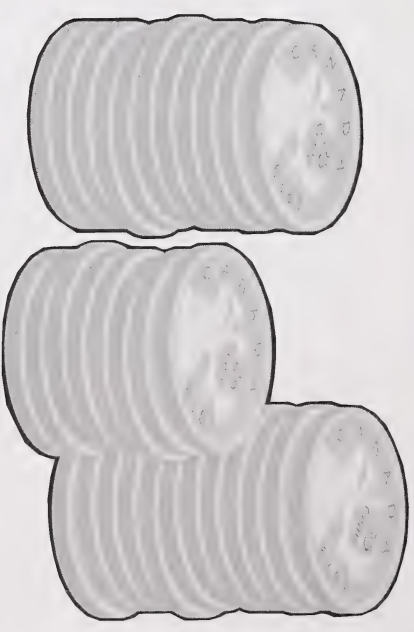
Take your calculator out of your Math Box.

Skip count by 25s on your calculator. Do you remember how to skip count using the calculator?

Press these keys: | 2 | 5 | + | = | = | = | = |

What are the four numbers that appear on the screen?

☐ , ☐ , ☐ , ☐

Count by 25 here on the one hundred chart. First count to 25 and then colour that number red. Count out 25 more starting at 26, pointing at the numbers as you do so. Colour the next number you arrive at red. Keep going until you get to 100.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

What numbers are coloured red on the chart?

☐ , ☐ , ☐ , ☐

Do you see a pattern? Circle **yes** or **no**. What is it?

Skip count by 25s. Write the numbers here. 25, ☐ , ☐ , ☐

Lesson 3
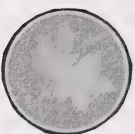
What is this coin called? _____ or ☐ ¢

What is this coin called? _____ or ☐ ¢

Counting Coin Collections

What is this coin called? _____ or [ ] ¢

What is this coin called? _____ or [ ] ¢
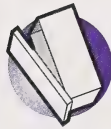
Take your play money, paper coins, or real coins out of your Math Box.

Now Elena knows the value of two quarters. So do you.

What is it? [ ] ¢ Yes, two quarters = 50¢.

Discuss and brainstorm other coins that make a value of 50¢. The student can show 5 dimes, 10 nickels, 50 pennies, or any combination totalling 50¢.

What other coins make 50¢? With your coins, show a set of coins that is equal to the value of 50¢.

Draw the coins in the box.

Counting Coin Collections
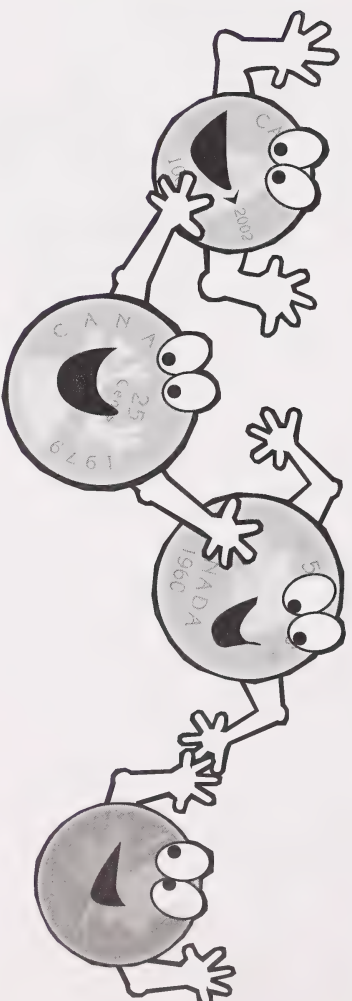
There are many other ways of showing coins worth 50¢. With your coins, show your home instructor at least ten sets of coins that are worth 50¢. Draw four of the sets in the boxes.

Assist the student in finding the various combinations of quarters, dimes, nickels, and pennies that make up 50¢.

141

Counting Coin Collections

Circle the sets of coins that are equal to 38¢.

Circle the sets of coins that are equal to 46¢.

Counting Coin Collections
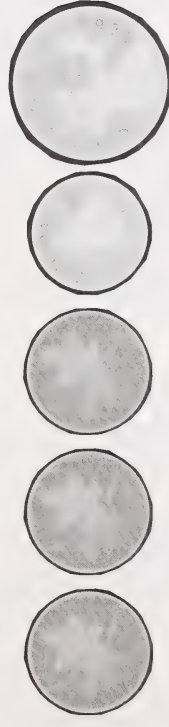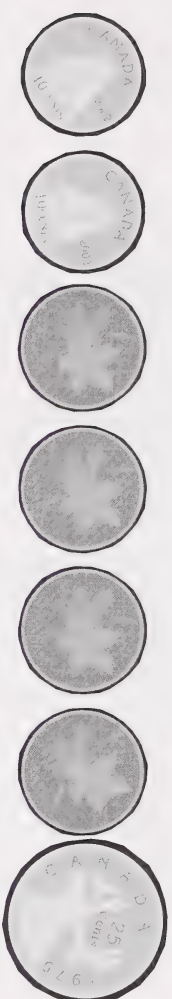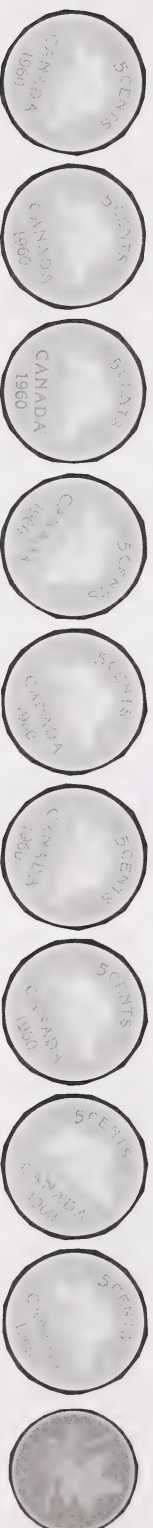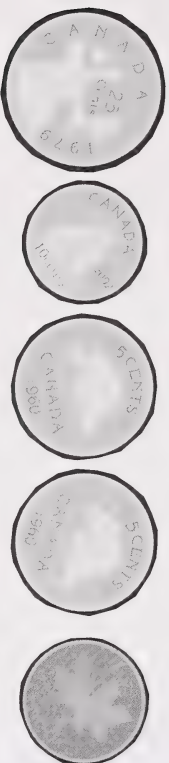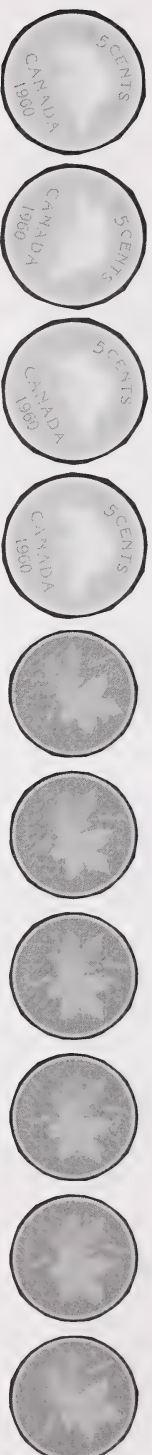
Lesson 4

Look at the set of coins, but don't count the value. Estimate how much money is in this set of coins. Remember to print ¢.

Estimate	Actual

Now count the value of the coins and print the actual amount on the chart.

Was your estimate a good one? Circle **yes** or **no**.

Counting Coin Collections

Estimate and then count the value of the coins for the following.

Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.

Was your estimate a good one? Circle **yes** or **no**.

Estimate	Actual

Counting Coin Collections

Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.

Estimate	Actual

Was your estimate a good one? Circle **yes** or **no**.

Counting Coin Collections

Your home instructor will arrange sets of coins on your desk for you to estimate. Do not count them until after you have made your estimate. Print the estimate and actual value on the charts below. Do not forget to print ¢.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Put the sets, one at a time, on the student's desk.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **no** .

Was your estimate a good one?

Circle **Yes** or **no** .

Estimate	Actual

For more practice counting coins, go to the Extension Activities.
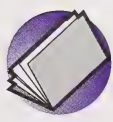
Go to Assignment Booklet 6B.

Day 16: Dollars and Cents

Have you lost a tooth yet? If you have, what did you do with it?

Jasper put his tooth under his pillow when he lost it. Why do you think he did that?

That is one way Jasper is learning about the value of coins.

Today you will be learning about the worth of a dollar. There are many ways to put coins together to make a dollar. You will see how many ways you can make one dollar!

Dollars and Cents

Jasper's family went to a restaurant for a meal to celebrate his mother's birthday. Jasper ordered a steak—well-done. On his very first bite, his bottom tooth came out! It had been loose for awhile, so he wasn't too surprised. Later that evening, he put his tooth under his pillow. The next morning he found a one-dollar coin under the pillow! Now Jasper could buy some more hockey cards.

Dollars and Cents

Jasper had just been learning about coins and their value. He wondered how much one dollar was worth.
Do you know?

One dollar is worth 100 cents.

One dollar = 100¢

What is one dollar worth? _____

Lesson 2
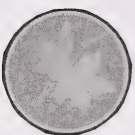
What is this coin called? _____ or ☐ ¢

Dollars and Cents

What is this coin called? _____ or ☐ ¢

What is this coin called? _____ or ☐ ¢

What is this coin called? _____ or ☐ ¢

What is this coin called? _____ or ☐ ¢

Guide the student to skip count by five, ten, and twenty-five to answer these questions.

How many pennies make up one dollar?

How many nickels make up one dollar?

How many dimes make up one dollar?

How many quarters make up one dollar?

How did you figure all those out?

Dollars and Cents

one dollar = _____ pennies

one dollar = _____ nickels

one dollar = _____ dimes

one dollar = _____ quarters

What other coins make one dollar? With your coins or play coins, show a set that is equal to the value of one dollar. How many ways do you think there are of making sets of coins that are worth one dollar?

Draw the coins in the box.

Discuss and brainstorm other coins that make a value of one dollar. The student can show 10 dimes, 20 nickels, 100 pennies, or any combination totalling one dollar.

Dollars and Cents

Assist the student in making up various combinations of quarters, dimes, nickels, and pennies that add up to one dollar.

Did you know that there are 242 ways of showing sets of coins that equal the value of one dollar? With your coins, show your home instructor at least ten sets of coins that are worth one dollar. Draw four of the sets in the boxes.

Dollars and Cents

Circle the sets of coins that are equal to 78¢.

Dollars and Cents
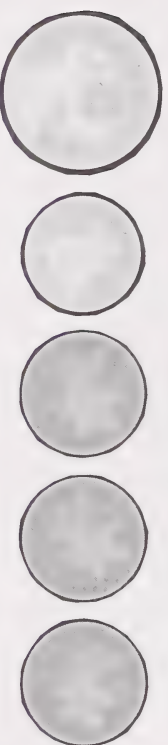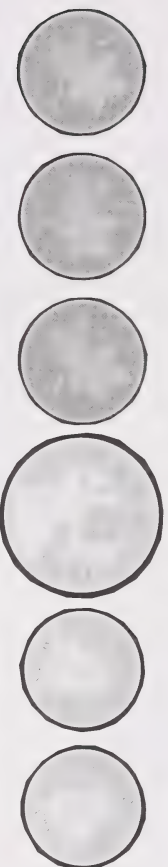
Circle the sets of coins that are equal to 92¢.
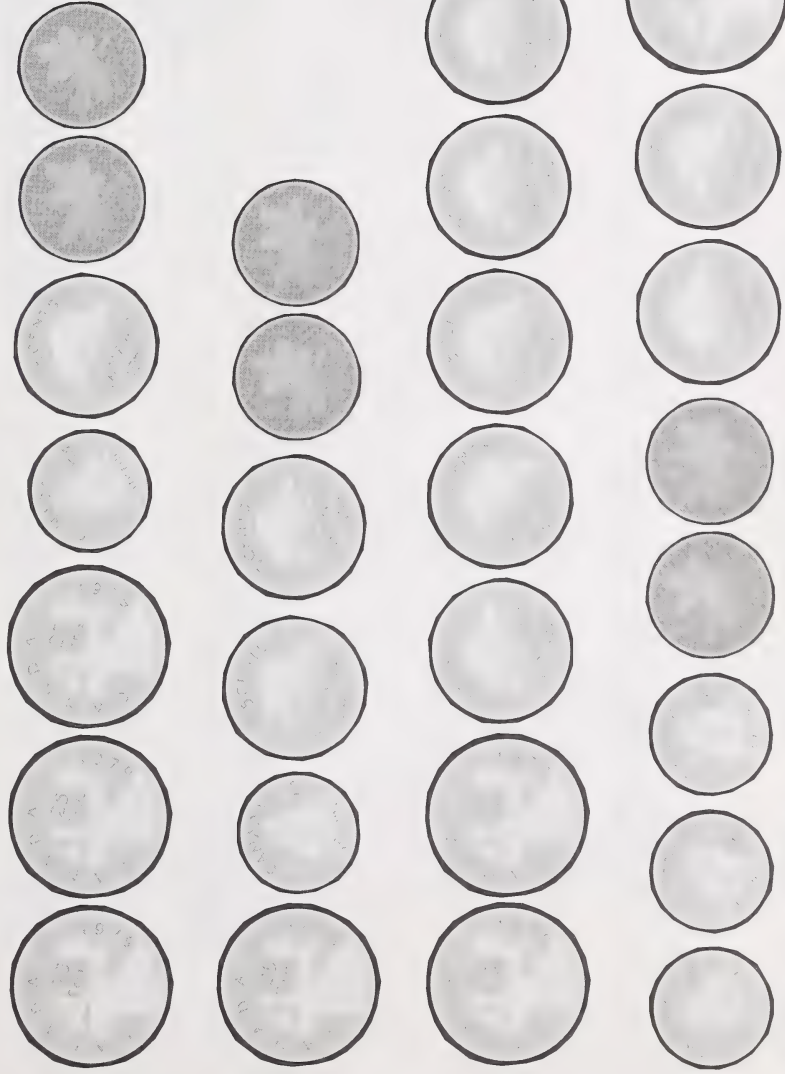
Lesson 3

Look at the set of coins but don't count the value. Estimate how much money is in the set of coins. Do not forget to print ¢.

Estimate	Actual

Now count the value of the coins and print the actual amount on the chart. Was your estimate a good one?

Circle **yes** or **no**.

Dollars and Cents

Estimate and then count the value of the coins for the following.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Was your estimate a good one?

Estimate	Actual

Circle **Yes** or **No**.

Was your estimate a good one?

Estimate	Actual

Circle **Yes** or **No**.

Dollars and Cents
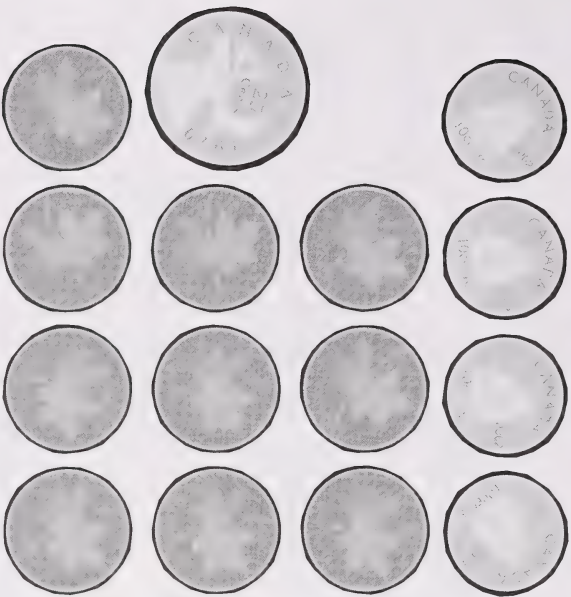
Your home instructor will arrange sets of coins on your desk for you to estimate. Do not count them until after you have made your estimate. Print the estimate and actual value on the charts below. Remember to print ¢.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Estimate	Actual

Was your estimate a good one?

Circle **Yes** or **No**.

Put the sets, one at a time, on the student's desk.
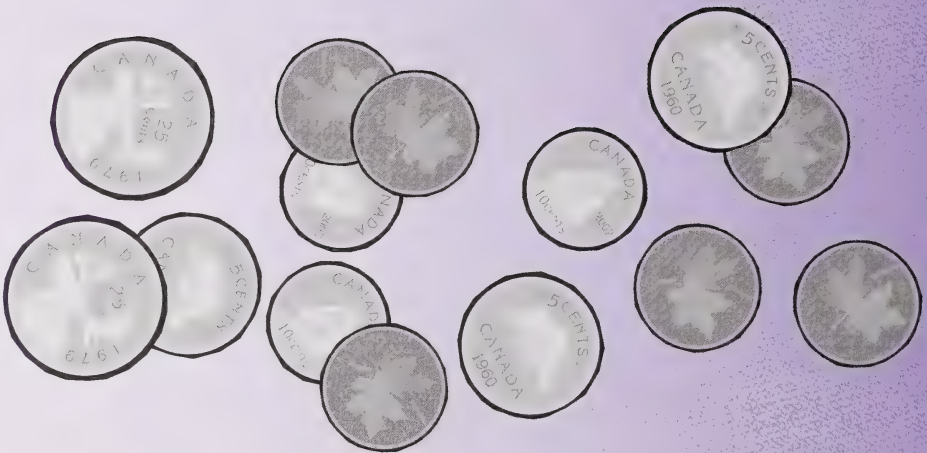
Was your estimate a good one?

Estimate	Actual

Circle **Yes** or **No**.

Was your estimate a good one?

Estimate	Actual

Circle **Yes** or **No**.

Go to Assignment Booklet 6B.

Day 17: How Much Is That Worth?

Elena lost a tooth, too! She showed Jasper the coin she got for her tooth. It was a two-dollar coin. How much would that be worth?

Besides coins, you will also use five-dollar and ten-dollar bills today. You will need to know how much each of those bills is worth.

You will also go shopping for some items. Will you have enough money to buy all of the items? You will have to decide.

Lesson 1

Jasper showed Elena the one-dollar coin he got for his tooth. Elena said her tooth fell out too and showed Jasper the coin she got. Her coin looked different from Jasper's.

Elena's coin
two dollars = 200¢

Jasper's coin
one dollar = 100¢

Elena's coin is a two-dollar coin.

How much is a one-dollar coin worth? ☐ ¢

How much do you think a two-dollar coin is worth? ☐ ¢

A two-dollar coin is worth 200 cents.

Two dollars = 200 ¢

Lesson 2

Do you know what this is? Circle   **yes**   or   **no** .

It is a five-dollar bill. If one dollar is worth 100 cents, and two dollars is worth 200 cents, what is five dollars

worth? [ ] ¢

A five-dollar bill is worth 500 cents.

five dollars = 500 ¢

Lesson 3

Do you know what this is?

Circle 🌼**Yes** or 🌼**No**.

It is a ten-dollar bill. If one dollar is worth 100 cents, two dollars are worth 200 cents, and five dollars are

worth 500 cents, what do you think is the worth of ten dollars?

A ten-dollar bill is worth 1000 cents.

ten dollars = 1000 ¢

How Much Is That Worth?

ten dollars = 1000¢

five dollars = 500¢

one dollar = 100¢   two dollars = 200¢

1. Print the value of each of the coins and bills.
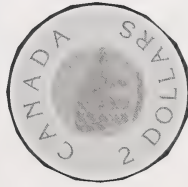
a. ☐ ¢

b. ☐ ¢
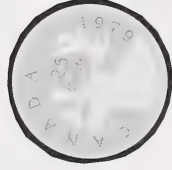
c. ☐ ¢

d. ☐ ¢

e. ☐ ¢
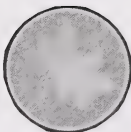
f. ☐ ¢

g. ☐ ¢

h. ☐ ¢

i. ☐ ¢
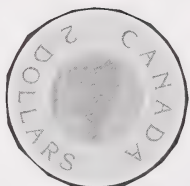
j. ☐ ¢

k. ☐ ¢

l. ☐ ¢
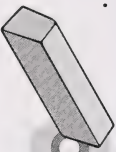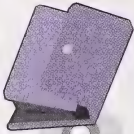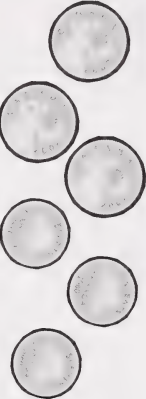
2. Match the coins or bills to their value.
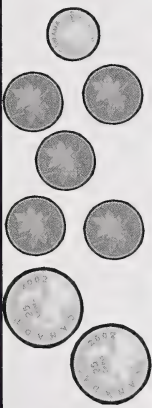
a. ten-dollar bill   25¢

b. two-dollar bill   5¢

c. quarter   200¢

d. nickel   1000¢

e. one-dollar bill   10¢

f. five-dollar bill   1¢

g. penny   100¢

h. dime   500¢

Lesson 4

On the next page you are going shopping for items. The amount of money you have for each item is pictured next to it.

Print the amount of money you have for each item. Then decide whether you have too much or not enough money to buy the item. If you do not have enough money, draw the extra coins you need in the last column.

The Items You Want to Buy	The Coins You Have	What is the value of the coins?	Do you have too much money or not enough?	Draw the extra coins you need to buy the item.
1.　55¢				
2.　84¢				
3.　100¢				
4.　95¢				

How Much Is That Worth?

5.				
67¢				
6.				
88¢				
7.				
73¢				
8.				
99¢				

For more practice working with money, go to the Extension Activities.

Go to Assignment Booklet 6B.

Day 18: What Do I Know Now?

It is time to put everything together to see what you have learned. At the beginning of this module, you worked with measuring length using centimetres, decimetres, and metres. Do you remember what those are? How long is each one?

You explored weight and temperature. You used shapes to cover spaces, and of course, you learned the value of coins and bills. All in all, you measured a variety of things.

Now, you are ready to recall what you know.

What Do I Know Now?

This is a review of what you learned in this module. See how much you remember.

1. Measure each of these pencils. Colour the longest one purple. Put an X on the shortest pencil. Order them from smallest to largest in the circles. Number 1 will be the smallest.

a.

cm

cm

cm

cm

b.

c.

cm ◯

cm ◯

cm ◯

cm ◯

cm ◯

cm ◯

cm ◯
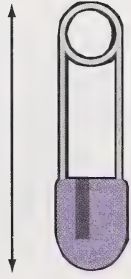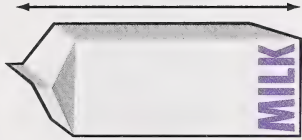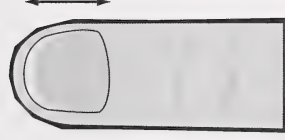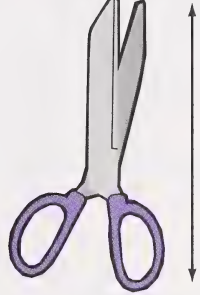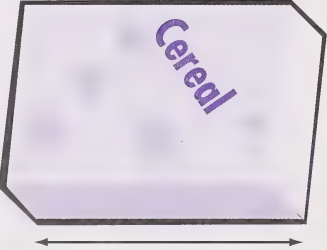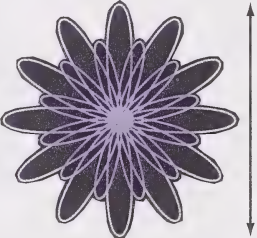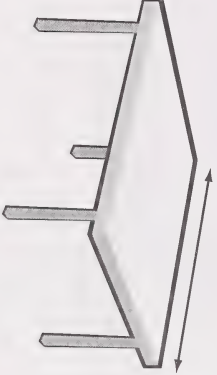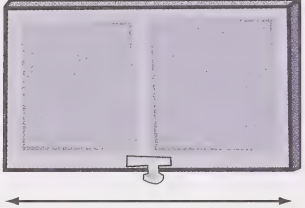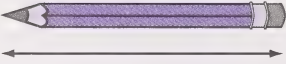
cm ◯

2. Look at the drawings. Each item in real life is more than a decimetre, or less than a decimetre. Look at the arrow and then circle less than or more than in each box.

a.

less than   more than

c.

MILK

less than   more than

e.

less than   more than

b.

Mathematics

less than   more than

d.

less than   more than

f.

less than   more than

3. Look at the drawings. In real life each item is more than a metre, or less than a metre. Look at the arrow and then circle less than or more than in each box.

a.

Cereal

less than   more than

b.

less than   more than

c.

less than   more than

d.

less than   more than

e.

less than   more than

f.

less than   more than

What Do I Know Now?

4. Circle the unit you would use to measure each of the following.

a. the length of a pen   cm dm m

b. the width of a tooth   cm dm m

c. the length of a bicycle   cm dm m

d. the distance around your head   cm dm m

e. the height of a door   cm dm m

f. the width of a tea kettle   cm dm m

g. the distance around a yard   cm dm m

h. the height of a table   cm dm m

5. a. Estimate how many small squares will cover the large square.
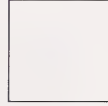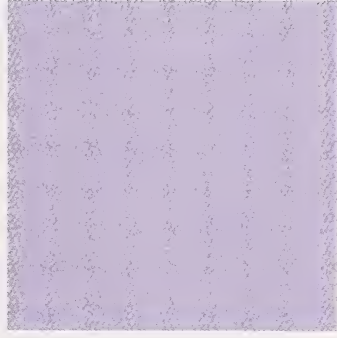
My estimate is ☐

b. Draw as many different shapes as possible with four squares. Use the dots to help you draw your squares.

c. Give three examples of small objects that are heavier than larger objects.

_____ is heavier than _____.

_____ is heavier than _____.

_____ is heavier than _____.

6. Will the temperature rise or fall? Fill in the blanks with rise or fall.

a. If you put a thermometer from hot water into cold water, the temperature will

_____.

b. If you put a thermometer from cool water into your mouth, the temperature will

_____.

c. If you put a thermometer from cold water into snow, the temperature will

_____.

d. If you put a thermometer from the oven into cool water, the temperature will

_____.

7. a. one penny = ☐ ¢

b. one dime = ☐ ¢

c. one dollar = ☐ ¢

d. five dollars = ☐ ¢

e. one nickel = ☐ ¢

f. one quarter = ☐ ¢

g. two dollars = ☐ ¢

h. ten dollars = ☐ ¢

8. a. one dollar = ☐ cents

b. one dollar = ☐ nickels

c. one dollar = ☐ dimes

d. one dollar = ☐ quarters

What Do I Know Now?

Draw a set of coins to make these amounts.

36¢

72¢

95¢

19¢

What Do I Know Now?

88¢

60¢

For more practice with money, go to the Extension Activities.

congratulations

You have now completed Module 6: Measure It.

You learned to:

- use centimetres, decimetres, and metres
- measure the length, height, and distance around objects
- measure the weight of objects
- find out how much different containers can hold
- use a thermometer to tell if the temperature is rising or falling
- estimate and count the worth of coins up to two dollars
- estimate and count the value in cents of five-dollar and ten-dollar bills

Knowing how to use these units to measure will help in many everyday ways. You will find it easier to count your money, estimate how much something weighs, measure the length of ribbon you need to wrap a package, and much, much more.

Extension Activities

Days 2 and 3

Activity 1
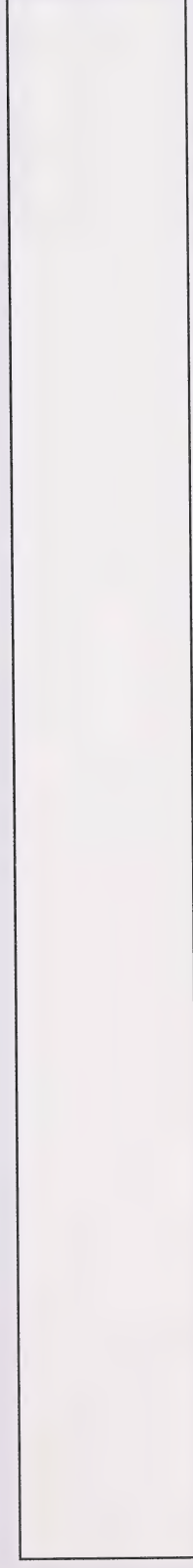
How much toothpaste do you use each time you brush your teeth? [ ] cm

Draw the amount in the box.

How much toothpaste do you use in one day? [ ] cm

Draw the amount in the box.

Extension Activities

How much toothpaste do you use in one week? ☐ cm

Draw the amount in the box.

Activity 2

Find ten or more things around your house that can be measured in centimetres. Draw them in the boxes below according to whether they are more than one centimetre, less than one centimetre, or about one centimetre.

These things are more than one centimetre long.

Extension Activities

These things are less than one centimetre long.

These things are about one centimetre long.

Day 4

Activity 1

Find ten or more things around your house that can be measured in decimetres. Draw them in the suitable boxes below.

These things are about one decimetre long.

These things are less than one decimetre long.

Extension Activities

These things are more than one decimetre long.

Activity 2

You will need pennies, dimes, or bingo chips. You will use them to make and measure stacks of different heights.

- Make a stack about one decimetre tall with your chips or coins and then measure it.

- Make a stack about 5 cm tall and then measure it.

- Make stacks of different heights. First, decide how high you want the stack, then build it. Measure each one to see if the stack is the height you wanted it to be.

Extension Activities

Activity 3

Select one or more manipulatives, like beans or pasta.

Use them to try to make lines of the following lengths. Then measure to check.

- 1 dm

- 4 dm

- 15 cm

- 3 dm

Now decide how long you want a line to be, and then build it. Measure it to see if it is the length you wanted it to be.

Days 5 and 6

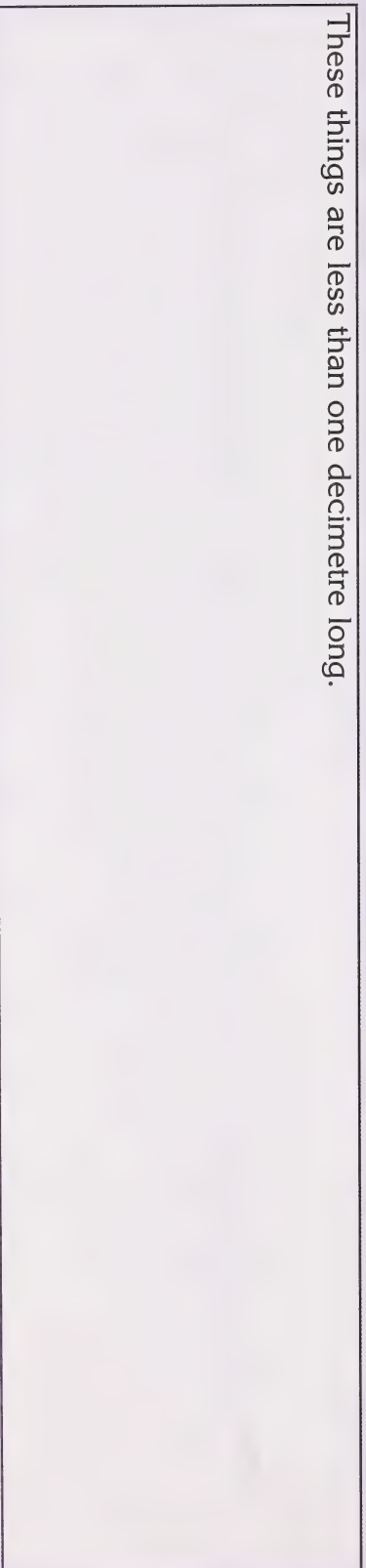### Activity 1

Find things around your house to measure in metres. Draw them in the boxes below.

These things are about one metre long.

These things are less than one metre long.

Extension Activities

These things are more than one metre long.

(blank space)

Activity 2

Estimate and then measure in metres the distance from your bedroom to the rooms listed below.

The Distance from Your Bedroom	Measurement in Metres	
to the kitchen		
to the bathroom		
to the living room		
to the front door		

Extension Activities

Activity 3

Measure and cut a piece of yarn or string that is three metres long.

Make any designs you want that use the full three metres of yarn or string. If you like, you can try making the shapes pictured here.

Activity 4

Draw a life-sized image of yourself!

You will need several large pieces of paper. You can use regular-sized paper if you don't have large pieces, but you will then have more papers to cut out and tape together.

Extension Activities

Before you start drawing, your home instructor will help you make measurements of the following:

- the length of your face
- the length of your neck
- the distance between your collarbone and waist
- the distance between your waist and your knee
- the distance between your knee and your heel
- the length of your arm from shoulder to fingertip

Now use these measurements to draw yourself. Then cut out the shape you drew and tape the pieces together. Colour and then hang your image on the wall.

Activity 5

Measure out a piece of string or yarn exactly one metre long.

On the string, place a mark where you think the following would be:

- 50 cm   - 75 cm   - 10 cm   - 60 cm
- 25 cm   - 5 cm   - 30 cm   - 90 cm

Check your markings with a metre stick. Were they accurate?

Extension Activities

Activity 6

Sock Throw

You will need a beanbag for this activity. If you don't have one, use a sock. Put some beans in it and tie it closed.

Make a line on the floor with tape. Stand behind the line and throw your sock. You may want to do this activity in a hallway or outside.

Estimate how far it went. ☐ m

Measure your throw.

How many metres did you throw it? ☐ m

Extension Activities

Now your home instructor throws the sock. Compare that throw with your own.

Estimate how far it went. ⬚ m   Measure your home instructor's throw. How far was it? ⬚ m

Try it two more times. Estimate each throw. Then measure the distance.

2nd Throw	Estimate of Throw in m	Measurement of Throw in m	Place
me			◯
my home instructor			◯

3rd Throw	Estimate of Throw in m	Measurement of throw in m	◯
me			◯
my home instructor			◯

Write the length of the four throws. Then, in the circles, order the four measurements from least to greatest.

Extension Activities

Activity 7

You will need either paper strips or paper clips. You will be making chains out of one of them.

Estimate how many paper clips you will need to make a chain one metre long.

Make chains of these lengths:

- 1 m
- 2 m
- 5 m

Check your chains with a metre stick to see if you got the measurement right.

Days 7 and 8

Activity 1

You will need pattern blocks, or cut-out shapes.

1. Choose a pattern block or shape (triangle, square, rectangle). Make different shapes with six blocks. Remember that each time you make a shape you are covering the same amount of space.

2. Try out the other blocks or shapes, making as many different shapes as possible using six blocks.

Extension Activities

Day 9

Activity 1

You will be using an eye-dropper, a cup, and a pitcher as units of measure. Decide which of these three units would work best to fill the following containers with water. Then estimate, measure, and record the actual amounts.

Container	Unit of Measure	Estimate	Actual
ice cream pail			
vase			
soup bowl			
film container			
can			
tablespoon			

Extension Activities

Days 10 and 11

Activity 1

Use the same five objects you weighed with the blocks on Day 10, Lesson 4. This time, instead of balancing each object with blocks, use bingo chips, beans, or some other small objects. Record the results on the graph. Print in the first column the name of the object you weighed. In the second column, print the number of blocks you used the first time you weighed the objects in Lesson 4. In the third column, print the item you will use to balance the scale this time. Then print the number you will use to balance each object.

Object	Number of Blocks Used the First Time	Number of Beans or Chips Used the Second Time

Extension Activities
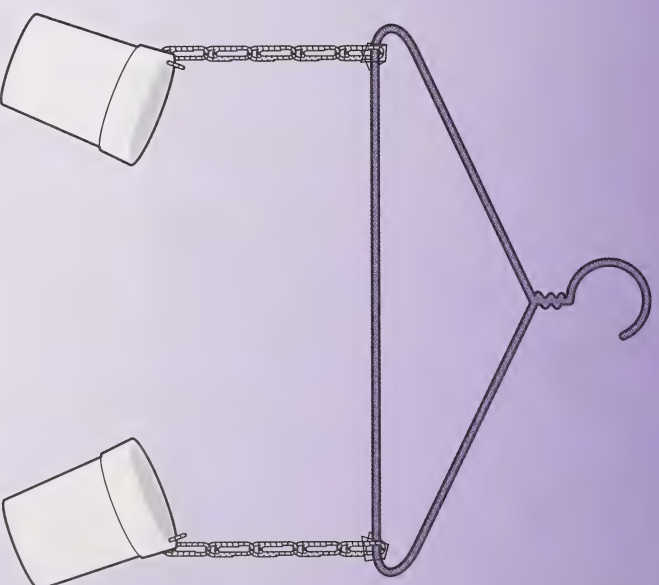
Activity 2

Make Your Own Balance!

You will need a clothes hanger, ten paper clips, tape, and two paper cups.

Here's what you need to do to make your balance.

• Make two chains of paper clips with five on each chain.

• Hook the chains on each end of the hanger. Tape the chains onto the hanger for a secure fit.

• Hook the other ends of the chains to paper cups.

• Hang the hanger. Make sure the chains and paper cups are even.

You can now use this balance both to compare weights and weigh objects.

Find objects you would like to weigh and try it out! Use your interlocking cubes to balance the objects you are weighing.

Extension Activities

Activity 3

Draw pictures of different things that are heavier and lighter than you.

Objects that Are Heavier than I Am	Objects that Are Lighter than I Am

Extension Activities

Activity 4

You will need a balance scale and a variety of objects to weigh.

Choose one object as your reference object. For example, you could choose your glue bottle. Find objects that weigh more and less than the glue bottle. Print the results on the chart. Look at the first chart as an example of what to do.

The reference object: glue bottle

Objects that Are Lighter	Objects that Weigh the Same	Objects that Are Heavier
eraser	4 dominoes	10 dominoes
pen	small juice box	can of soup

Your reference object: _____

Objects that Are Lighter	Objects that Weigh the Same	Objects that Are Heavier

Extension Activities

Activity 5

You will need a balance scale and modelling clay.

1. Make two balls out of your modelling clay. Weigh them to make sure they weigh the same. Put one ball in each of the pans to compare weights. Keep working on the balls until the balance is even.

2. Now you have two balls of equal weight. Take one of the balls and make a snake out of it. Put it back on the pan. Are the scales balanced?

3. Take the other ball and cut it up into several pieces. Now put those pieces on the pan. Are the scales still balanced?

4. Take the cut-up pieces and put them together again. Now flatten them. Put the flat piece back on the pan. Are the scales still balanced?

What does this activity teach you about an object changing shape? Does it still weigh the same even when it changes shape?

Here's something for you to think about. If you put an ice cube in a cup and weighed it, then let it melt, would the water in the cup weigh the same as the ice cube?

Extension Activities

Days 13 and 14

Activity 1

Place-Value Game

You have a container of pennies and a container of dimes. The Money Cards are in a bowl or container. Take turns pulling a Money Card with your home instructor for five turns each. Look at the number on the card and count out the pennies. If you reach ten, exchange the ten pennies for a dime. The person with the most dimes wins. Use the tally chart below to keep track.

	Tens	Ones
you		
your home instructor		

Extension Activities

Activity 2

You need pennies, nickels, dimes, and the Money Cards to number 25 from the Appendix.

Take five turns each with your home instructor pulling a money card from the face-down stack. See how many different ways you can show that amount. The one who can make the most sets of ways wins.

Day 15

Activity 1

You need pennies, nickels, dimes, and the Money Cards from the Place-Value Game to number 50.

Take turns with your home instructor as in Day 14: Activity 2.

Days 16, 17, 18

Activity 1

Using your coins, see how many different sets you can create for each of the following amounts:

66¢   95¢   73¢   38¢   59¢   47¢   26¢   16¢   84¢

Extension Activities

Activity 2

Design Your Own Money

If you had to design new coins and bills, what would they look like? Draw pictures of your new coins and bills. Discuss with your home instructor why you chose your designs.

Activity 3

Metres of Money

You need a metre stick for this activity.

Estimate how many pennies in a straight line you would need to make the line one metre long.

Place the pennies along the metre stick and count them. How many did you count?

What is the worth of one metre of pennies? ☐ ¢

Extension Activities

Do the same for nickels, dimes, quarters, and one-dollar and two-dollar coins.

What will you do if you do not have enough coins to make a row one metre long? Think of ways to figure out the measurement using half a metre, or one decimetre. Discuss this with your home instructor.

Activity 4

Money Problems

1. You had 5 coins in your pocket worth 75¢. You lost two coins and now have only 55¢.

Which two coins did you lose? _____

Which coins do you have left? _____

2. You had 10 coins worth 88¢. You lost two again. Now you have 38¢ left.

Which two coins did you lose? _____

Which coins do you have left? _____

On a separate piece of paper, make up your own problems for your home instructor to solve.

Activity 5

Stacks of Money

Without counting them first, make a stack of pennies. Estimate how many pennies there are.

Count them. How many are there? ☐ Was your estimate a good one? Circle 🐷 yes or 🐷 no.

Make a stack of nickels. Estimate how much the stack is worth. ☐ ¢

Count them. How many nickels are there? ☐ What is their worth? ☐ ¢

Was your estimate a good one? Circle 🐷 yes or 🐷 no.

Extension Activities

Do the same with dimes, quarters, one-dollar coins, and two-dollar coins. Estimate how much each stack is worth. Then count the number in each stack and figure out their worth.

How tall would 100 nickels be? _____

What would be taller, a stack of 100 dimes or 100 quarters? _____ Why?

Make stacks of coins for your home instructor to guess their worth.

Activity 6

Shopping

If you had one dollar, which of the following three items would you buy? Put a check mark beside the three you would buy.

gum   15¢
chocolate bar 33¢
licorice   25¢
comic book   29¢
potato chips 40¢
corn chips   42¢

Extension Activities

How much did you spend? ☐ ¢

How much change did you get? ☐ ¢ Show your work.

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Pretend you have your own store now. On a separate piece of paper, list items and their prices for your home instructor to buy. Which three items would your home instructor buy? How much did your home instructor spend? How much money and change did the home instructor give and receive?

Appendix

Appendix

Image Credits

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Square Shapes

Triangle Shapes

Rectangle Shapes

Money Cards

46¢	47¢	48¢	49¢	50¢
41¢	42¢	43¢	44¢	45¢
36¢	37¢	38¢	39¢	40¢
31¢	32¢	33¢	34¢	35¢
26¢	27¢	28¢	29¢	30¢
21¢	22¢	23¢	24¢	25¢
16¢	17¢	18¢	19¢	20¢
11¢	12¢	13¢	14¢	15¢
6¢	7¢	8¢	9¢	10¢
1¢	2¢	3¢	4¢	5¢

Coins

Coins